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HISTORICAL ACCOUNT  
OF  
THE CLIMATES AND DISEASES  
OF  
THE UNITED STATES OF AMERICA;  
AND OF  
THE REMEDIES AND METHODS OF TREATMENT, WHICH  
HAVE BEEN FOUND MOST USEFUL AND EFFICACI-  
OUS, PARTICULARLY IN THOSE DISEASES WHICH  
DEPEND UPON CLIMATE AND SITUATION.  
COLLECTED PRINCIPALLY FROM  
PERSONAL OBSERVATION,  
AND  
THE COMMUNICATIONS OF PHYSICIANS OF TALENTS AND  
EXPERIENCE, RESIDING IN THE SEVERAL STATES.

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BY WILLIAM CURRIE,  
Fellow of the College of Physicians of Philadelphia.

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*Nullius addictus jurare in verba magistri.*—Hor.

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TO  
JOHN REDMAN, M. D.

PRESIDENT OF THE COLLEGE OF PHYSICIANS

OF  
PHILADELPHIA, &c.

*Worthy Sir,*

*DESIROUS of paying my respects to a man distinguished for liberality of sentiment, and consistency of conduct, as well as for professional talents, and encouraged by the indulgence you have shewn to such literary productions as have utility and the interests of the community for their object, I have ventured to inscribe the following work to you: and I request you to do me the honour of accepting it, not as a compliment of mere civility, but as a tribute of gratitude and attention, to which you are justly entitled from*

*Your much obliged and  
Very humble servant,  
THE AUTHOR.*

*Philadelphia, Dec. 29, 1791.*







# INTRODUCTION.

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I WAS induced to undertake the troublesome and difficult task of collecting and publishing a concise and faithful account of the Climates and Diseases of the United States of America, by a desire of removing the trouble and inconvenience which result from accommodating the rules of practice and forms of prescription made in other countries to the diseases which occur in this, where the climate, soil, and modes of living of the inhabitants, and of course their constitutions, and the semicology of diseases, even of the same genus, are in many respects different; and by a presumption, that such an account might contribute in some measure to improve the treatment of epidemics, especially in this country.

WITH these objects in view, I opened a correspondence with several physicians of talents and experience residing in the several states, and with their assistance, joined to my own personal observations, and such information as I could collect from the few books which contain any thing relative to the subject, have composed the following pages; in  
which



which I have endeavoured to exhibit, a synopsis or general view of the situation and climate of each state; and of those diseases in particular which depend upon climate and situation, (with occasional remarks on others); and an account of the remedies and methods of treatment which have been found most uniformly successful.

As health is a blessing which enhances the value of every enjoyment, and long life the natural desire of all mankind, I have endeavoured to point out the circumstances most favourable thereto, as well as those productive of disease and death. For this purpose I have inserted a number of meteorological tables and bills of mortality,

As climate and situation have a remarkable influence upon the constitution and health, as well as upon the complexion and figure of mankind, and as the temperature of climate depends upon various circumstances besides latitude, or proximity to the equator; I have been at some pains in endeavouring to shew what those circumstances are, the causes on which they depend, and the means by which they may be altered.

In the investigation of the nature and causes of diseases, and in determining the effects of remedies, I have been uniformly governed by actual experience, never by hypothesis or plausible conjectures, being convinced that for want of this precaution, the schools of physic have successively



cessively fallen into the most incongruous and palpable errors, and the greatest masters of reasoning have proved the most unsuccessful interpreters of nature's laws.

BUT I am by no means an advocate for the exclusion of reasoning or theory (founded on cautious and judicious induction) from medical pursuits, as has unfortunately of late become too much the fashion.

FOR without reasoning, it would be impossible to acquire a knowledge of the proximate causes of diseases, or the particular conditions of the system on which the symptoms of diseases depend.

AND as there are several diseases of a different nature, and produced by causes entirely different in their operation, which have many symptoms in common; the practitioner who is not possessed of this knowledge, must inevitably commit many fatal mistakes.

BUT this knowledge so indispensibly necessary to enable a physician to distinguish one species of disease from another, as well as to discover the indications he ought to pursue in the cure, can only be acquired, (after a previous acquaintance with the structure, connection of parts, and œconomy of the human body in a sound and healthy state) by much study and reflection, and by the strictest enquiry into the condition of the several functions of the body in disease.

WHOEVER



WHOEVER therefore undertakes the cure of diseases without this knowledge is an empiric, and merits the contempt and detestation of every one who values the lives and safety of his fellow-creatures; for "though he may kill by licence, he can only cure by chance."

THE annals of every age, and the bills of mortality of every country, would, if unveiled, produce proofs as strong as those of Holy Writ, that more lives have been destroyed by the villainy of quacks, and the ignorance and officiousness of nostrum-mongers, than by disease, owing to the credulity of the ignorant, and the remissness of government: I am, therefore, much surpris'd that our enlightened legislatures (whose duty it is to protect the lives as well as the privileges and property of those whom ignorance or want of information renders liable to imposition) have never yet made provision to prevent the like deplorable effects in this country.

THE difficulty of obtaining authentic and satisfactory information on a subject never before attempted in America, has obliged me to leave many parts mutilated and imperfect; and want of sufficient leisure has prevented me from paying requisite attention to systematic arrangement; but as the work has some claim to originality, abounds with a number of interesting facts, and is intended as an introduction to a complete system of practice, (now ready for the press,) exhibiting all the latest and most important discoveries which have been made in medicine, I trust it will meet with that candour and indulgence to which the best intentions are entitled.

*Philadelphia, Dec. 29, 1791.*



A N  
HISTORICAL ACCOUNT  
OF THE  
CLIMATES AND DISEASES  
OF THE  
UNITED STATES OF AMERICA.

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*An ACCOUNT of the DISEASES which occur  
in the several States of NEW-ENGLAND,  
viz. NEW-HAMPSHIRE, MASSACHU-  
SETTS, RHODE-ISLAND and CONNEC-  
TICUT.*

“ **T**HE Diseases which occur in different  
parts of these states in the Winter  
and Spring Seasons among the farmers and  
mechanics who reside at a distance from the  
larger trading cities and towns, are principal-  
ly the Catarrh—Quinsy—Pleurisy—Rheu-  
matism—Tooth-Ach—Inflammation of the  
A Intestines,



Intestines, or of the Peritonæum—Hæctic fevers from internal Abscesses—Phlegmons—Erysipelas—Ophthalmia, or Sore Eyes—Spitting of Blood—Bleeding at the Nose—Piles—and sometimes, but rarely, the Scurvy, in families that live slovenly and eat nothing but salt meat and stale butter.”

“THE greatest number of the disorders which have been enumerated are found to be less frequent in Winter than in the Spring.”

THE winds which prevail during the greatest part of Winter, from the north and north west, though they are severe and piercing cold, occasioned by the great body of snow which covers the immense mountains over which they pass, instead of producing diseases, (by whatever mode of operation cold air acts upon animal bodies,) give vigor to the constitutions, and a freshness and bloom to the complexion of the inhabitants, unknown in southern climates.

“IN the early part of the Spring, ‘while the season as yet is unconfirmed, and oft at  
eve



even resumes the chilly blast,' those diseases are more frequent, but even then they are commonly the effect of imprudent exposure to cold and rainy weather, getting the feet wet, sitting on the damp ground, sleeping in damp sheets, neglecting to change wet clothes after exposure to the rain, &c. &c. or from frequent excesses or debauches in strong liquor, especially of fresh distilled rum."

"THE Small-Pox, which is an exotic disease, depending on specific infection, though once permitted, is not allowed at present to be communicated by inoculation in these states\*. Whenever it happens to appear in the natural way, all intercourse is avoided with the infected, except by those who have had the disease; and these last are excluded from all society after their attendance on the sick, till they have performed quarantine, after the manner of those in other countries who have been infected with the Plague."

"THE

\* Nor in any of the states, except New-York, New-Jersey, Pennsylvania, Delaware and South-Carolina.



“ THE diseases which occur in the summer and autumnal seasons are very few and rare. Those most commonly met with on high and dry situations, are, Phrenitis from Infolation, Diarrhœas, Choleras, a species of fever attended with symptoms of great debility, without being infectious or accompanied with any symptom indicative of inflammatory Diathesis.—This fever is confined to persons who have been over-fatigued by hard labour during the hot weather.”

“ IN low marshy situations, where there is much stagnant water, and which are subject to great inundations from the Spring freshes, intermittents sometimes occur; and when the Summers have been remarkably hot and dry, Remittents, accompanied with bilious symptoms, have frequently been observed to prevail—In the same situations and under apparently similar circumstances, the Dysentery also sometimes occurs, but more particularly among those who live on vegetable diet and watery drinks.”

“ IN the populous city of Boston, where  
people



people of different occupations and professions are collected together, the catalogue of diseases is greater, and they are more complex and difficult to cure."—This is the case in all large cities where the houses are built close together, and the occupations of the inhabitants are unfavourable to exercise; and the more so, as they recede from habits of temperance; especially where luxury and fashion take the lead of reason and common sense.

THE farmer while he tames the stubborn soil and forces it to reward his labours, insensibly acquires vigour of body and resolution of mind, and at the same time respires a salubrious air; but manufacturers and mechanics, confined to sedentary occupations, or condemned to vegetate in cellars and close apartments, breathe infection, and their minds become contracted as well as their lives abridged.

IN addition to the diseases already mentioned, the following may be numbered as occurring occasionally, though they can not be ascribed



ascribed to any peculiarity of climate, soil, or local situation.

“ CYNANCHE Maligna, or Putrid Quinsy, Scarlatina Anginosa--Hepatitis--Nephritis--Podagra, or Gout--Phthisis Pulmonalis, (very frequent)--Epilepsy--Apoplexy--Palsy--Asthma--Hooping Cough---Colic—Infantia--Melancholy--all the varieties of Dropsy--Hypochondria--Hysteria--Scrophula, &c.”

As the causes of these will be explained hereafter, I shall only observe in this place, that though a course of intemperance never fails of being destructive to health in a longer or shorter time, it is much slower in producing its effects in these northern states than in those to the southward—Many have been known to live in a high and dry situation in the daily habit of intoxication to old age; and those called soakers or tiplers, who drink a pint or two of rum, or half a gallon or a gallon of cyder per day, and make use of moderate exercise, are seldom known to be troubled with any complaint, but that of hard times and scarcity of money. But the vice of drunkenness



enness does not predominate in this country, as Montesquieu observes it does through others, in proportion to the coldness of the climate. *Vide Spirit of Laws*, Book 14th.

“ IN the spring season the inhabitants of Boston are much subject to catarrhal affections or coughs, owing to the coldness and moisture of the winds which prevail there at this season. These begin to rise about ten o’clock, A. M. and continue to blow till near sunset.”

DOCTOR *Isaac Senter*, in a letter to the author, dated Newport\*, (Rhode-Island) Feb. 19th, 1791, informs him that “ The epidemics, as well as most of the infectious diseases which visit this island, differ in some respects very considerably from the same complaints in the other sea ports of New-England—The Dyfentery is not only less frequent here, but is generally much less mortal. The remitting

\* Newport and Providence are the two principal towns in this state: The former lies in latitude 41°, 35'; contains 1000 houses, chiefly of wood, and 5530 inhabitants. This island is 68 miles in length and 40 in breadth. Providence about 30 miles N. W. of Newport—contains 700 houses.



ting fevers of the summer and autumn are seldom fatal, and the Putrid Fever, though rarely a native of this island, generally occurs in cold weather.

“ THE infectious diseases which I have seen here, all except the small-pox, are more mild than elsewhere.

“ SINCE my remembrance the genuine Intermitting Fever, was very common in different parts of the inland country of New-England; but for twenty years past has seldom been met with any where east of New-York.”

DR. Senter farther remarks, “ That the reigning epidemics of the different seasons in New-England, are very similar, and the Intermitting Fever is not the only disease that has become very rare within these last twenty years.

“ PEOPLE in this state are frequently affected with the Diarrhœa or Cholera, after having used violent exertions in the harvest  
3 field,

field, exposed to the insufferable blaze of the sun, after they have eaten too freely of vegetable substances and fresh meats, and have drank such drinks as have not been sufficiently fermented.

“ THE moderate use of rum at such a time has been found serviceable, as it restrains fermentation and prevents debility or relaxation. It also prevents the ill effects which are frequently occasioned by drinking cold water when the body is heated by exercise, and debilitated by the action of excessive heat.”

IN this last circumstance, laudanum in small doses mixed with hot toddy or strong tea, and frequently resumed, is a sovereign remedy.

THOUGH Connecticut appears to be subject to nearly equal degrees of the extremes of cold and heat with Massachusetts and New-Hampshire, and to more frequent and sudden changes of weather, it appears from its almost incredibly rapid increase of population to be more healthy than either of them—but if the reports of travellers are to be credited,

B it



it is less so than Rhode-Island, which is emphatically called the *Garden of Eden*.

THE heats in summer, which are extreme in other parts of New-England, are allayed in Rhode-Island by the cool and refreshing breezes from the sea. This is to be understood of those parts which approach the sea coast—farther back in the country the sea breezes have less effect, and the weather is consequently less variable. In winter, however, they pay dearly for these advantages from exposure to the N. W. wind, the tyrant of this country, which renders this island bleak and uncomfortable.

DR. Foulke, in a discourse which he read lately before the American Philosophical Society observes, that, “ in other countries, men are divided, according to their wealth or indigence, into three classes. The opulent, the middling, and the poor ; the idleness, luxuries, and debaucheries of the first, and the misery, and too frequent intemperance of the last, destroy a greater proportion of these two ; the intermediate class is below those indul-

gences

gences which prove fatal to the rich, and above those sufferings to which the unfortunate poor fall victims—this is therefore the happiest division of the three : Of the rich and poor, North-America furnishes a much smaller proportion than any other district of the known world. In Connecticut particularly the distribution of wealth and its concomitants is more equal than elsewhere ; and therefore, as far as excess or want of wealth may prove destructive or salutary to life, the inhabitants of this state may plead exemption from disease\*.”

*An*

\* Connecticut is the most populous in proportion to its extent, of any of the thirteen states. It is laid out in small farms, from 50 to 3 or 400 acres each, which are held by the farmers in fee simple ; and are generally cultivated as well as the nature of the soil will admit, and the whole state resembles a well cultivated garden. With that degree of industry which contributes to happiness, it produces the necessaries and conveniences of life in great plenty. In 1756 the number of inhabitants in this state was 130,611—in 1774 there were 197,856—The increase in 18 years was 67,245. From 1774 to 1782, the increase was only 11,294. This comparatively small increase was owing to the destructive effects of the war, and to the numerous emigrations to Vermont and other states. The inhabitants of all the states of New-England are almost all of English descent. There are no Dutch, French or Germans, and very few Scotch or Irish among them.



*The following Account of the Ages of different Persons who died in Connecticut, between the years 1771 and 1777, and from 1777 to 1782, when compared with those of other States and Countries, will serve to shew the advantages which its Inhabitants enjoy in point of health and longevity over most others.*

“ **F**ROM January 1st, 1771, to January 1st, 1777, 239 persons died at Milford, of which 33, or about one-seventh part were upwards of 70 years old; and 84, or about one-third part of the whole, were under 10 years.

“ FROM January 1st, 1777, to June 3d, 1782, died at Milford, 417 persons; of which 31, or about one-thirteenth part of the whole number, were 80 years old and upwards.”

OTHER calculations of a similar kind, made in different parts of the state from the bills of mortality, confirm the justness of the  
above

above proportion.—See the Memoirs of the American Academy of Arts and Sciences for more accurate bills of mortality, communicated by professor Wigglesworth, &c.

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*The following Observations on the Weather and Diseases at Salem\*, in Essex county, and state of Massachusetts, five leagues N. E. of Boston, for the year 1786, are extracted from a communication by Edward Augustus Holyoke, M. D. to the Massachusetts Medical Society.*

## J A N U A R Y, 1786.

		Day.	abroad.	in house.		
Thermometer.	highest	29th	46°	44°	} At noon.	
	lowest	18th	5° 5'	12°		

THE most common disorders this month, (which was a healthy one) were bad Coughs, Fevers, chiefly Ephemeræ, and those of a mild and moderate kind, Odontalgiaë, Rheumatisms;

\* Salem is a sea port town, containing about 9000 inhabitants; in a flat situation, with a sandy soil, remote from marshy grounds or stagnant water.



tifms ; besides a few instances of *Cynanchæ Malignæ*, or, more probably, *Scarlitina Anginosa*, &c.

## F E B R U A R Y.

		Day.	abroad.	in house.	
Thermometer.	highest	10th	47°	45°	
	lowest	1st	22° 12'	27°	At noon.

No remarkable variation of the Barometer—Wind generally N. W. and S. W.—feldom easterly—great quantities of snow—weather generally moderate.

THIS month very healthy.

A FEW patients with Coughs, some Hectical cases ; Pleurifies ; a few Asthmatics, and two instances of fatal Ileus.

## M A R C H.

		Day.	abroad.	in house.	
Thermometer.	highest	26th	78°	64°	
	lowest	11th	31°	33°	At noon.

Wind

WIND from N. W. and frequently high and blustering, and weather mostly very cold; but on the 25th and 26th remarkably warm, and the air smoky and hazy.

DISEASES this month similar to those of February, but more numerous. The Pertussis made its appearance about the middle of this month.

## A P R I L.

		Day.    abroad.    in house.				
Thermometer.	highest	28th	63°	56°	} At noon.	
	lowest	2d	30°	33°		

Barometer remarkably stationary.

ON the 1st and 2d a violent snow storm, from N. E.

## D I E A S E S.

PERTUSSIS, epidemical amongst children; a few adults also affected with it. Bad Coughs brought on by the long continuance of damp and raw weather, a number of which terminated in Phthisis; some other Pulmonic affections,



tions, and a few Rheumatisms; and many with Abscesses both internal and external.

## M A Y.

		Day.	abroad.	in house.	
Thermometer.	highest	27th	71°	63°	
	lowest	6th	48°	52°	At noon.

ON the 6th and 7th a storm from N. E. with much rain—Very few pleasant days, but much cold and wet, with almost constant easterly winds.

## D I S E A S E S.

BAD Coughs very frequent, as well as Pneumonic and Rheumatic complaints; Catarrhs; patients subject to Epilepsy more frequently affected than usual.

THE generality of weather cold and cloudy, with the wind almost constantly easterly.

## \* J U N E.

		Day.	abroad.	in house.	
Thermometer.	highest	4th	93°	85°	
	lowest	15th	71 °10'	65°	At noon.

Barometer very stationary.

No considerable rains, but showers on six several days. A little thunder on four days. Moderate winds, chiefly between N. W. and S. W.---about a third of the month fine agreeable warm weather---The rest of the month rather damp, cool, and unpleasant.

## D I S E A S E S.

HECTICAL cafes, and bad Coughs, numerous. Several cafes of Pleurisy and Rheumatism---Diarrhœas numerous, owing perhaps to changing customary clothing.

## C J U L Y.

\* In the years 1781, 1782, and 1783, the thermometer was higher in June than any other month of the year: But the highest that it was observed to rise at any time in either of those last mentioned years was 89 during the hottest part of the day.  
*Memoirs of the American Academy of Arts and Sciences.*



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## J U L Y.

		Day.	abroad.	in house.	
Thermometer.	highest	16th	91° 5'	85°	
	lowest	18th	60°	64°	At noon.

WINDS most prevalent from the west, though frequently from the east---two or three sultry dog-days---about one-third of the month the air was damp, and the winds blew from the eastward---Two remarkable changes from hot to cold, one on the 12th, the thermometer at 4 o'clock, P. M. at 82, and at 7 the same evening at 59°; and on the 27th at noon 89, and at 10 o'clock, P. M. down to 64.

## D I S E A S E S

OF the Alimentary Canal, Diarrhœa, Dyspepsia, and Gastrodyniœ very rife---Some Dyfenteries and Choleras---a few with Pleurodine--Apthæ in children---Diseases of various species, and very numerous.

AUGUST.

## AUGUST.

		Day.	abroad.	in house.		
Thermometer.	highest	6th	88°	84°	} At noon.	
	lowest	31st	62°	60°		

RAIN on five days, and a few slight showers besides—two days foggy—many easterly winds, though more frequent westerly ones, but none high—much damp weather—on the whole unusually cool.

## DISEASES.

DYSPEPSIA and Diarrhœa most common; a few cases of Pleurisy, and some of slow continued Fever, (commonly called the long Fever), the same as that described by Huxham under the title of *Slow Nervous Fever*, and appears to have been occasioned by excessive fatigue, and the application of highly stimulant powers to bodies affected with Nervous Diathesis, i. e. in a defective state of tone.

## SEPTEMBER.



## S E P T E M B E R.

		Day.	abroad.	in house.	
Thermometer.	highest	2d	71° 30'	74°	
		30th			
	lowest	24th	48°	59°	

} At noon.

PREVAILING winds from the westward, though frequently interrupted by easterly breezes, but no brisk gales ; much dry agreeable weather.

## D I S E A S E S.

THE variation of the barometer for six months past, but small.

FEVERS, for the most part, of a mild, low kind, very numerous ; none of which however, ended fatally ; a few Pleurifies ; Dyenteries frequent ; Hemoptyses, &c.

## O C T O B E R.

		Day.	abroad.	in house.	
Thermometer.	highest	1st	83°	76°	
	lowest	30th	40°	43°	

} At noon.

Two or three inches of snow fell on the  
30th.

30th. Winds prevailed chiefly from S. W. W. and N. W.

## D I S E A S E S.

FEVERS, beginning with Pleuritic symptoms, degenerated into those of the low Nervous type, and in some cases continued for three, four, or five weeks. Dysenteries were common, but generally terminated favourably. Pertussis disappeared, after having continued seven or eight months.

## N O V E M B E R.

		Day.	abroad. in house.		
Thermometer.	highest	7th	59°	55°	} At noon.
	lowest	28th	10°		

No storms or high winds, which is remarkable as there are generally more in this month than in any other—some snow on four days—Winds from S. W. W. and N. W. above two-third of the month—weather very variable though more than a third fair and dry.

## D I S E A S E S.



## D I S E A S E S

ALL of an inflammatory species, but not numerous ; a few with Cholerae Dysentericæ, which is remarkable so late in the year.

## D E C E M B E R.

		Day.    abroad.    in house.			} At noon.
Thermometer.	highest	31st	45°	43°	
	lowest	12th	17°	20°	

Two very violent storms at E. N. E. in which an immense quantity of snow fell, viz. on the 4th and 5th, and on the 9th and 10th. Winds from the westward much the greatest part of the month, and not very high.

## D I S E A S E S.

THIS month was remarkably healthy ; few or no febrile disorders, and not many Phlegmasiæ.

To an account of the diseases to which we are incident in this place (Salem) at the present day, it may not be improper to subjoin a few words respecting such as seldom or never

ver do happen, and of such as were frequent formerly, but seldom or never make their appearance here at present.

THE first I shall mention is the Rickets. This disease was formerly (about thirty-five or forty years ago) pretty common here, and more especially among negro children, as I very well remember ; but is now become so rare that I have not seen it more than three or four times, these eight or ten years, according to the best of my remembrance.

DR. Gliffon and others, the first writers on Rickets, inform us, that it first made its appearance about thirty years before they wrote, i. e. about the year 1620, in the counties of Dorset and Somerset, in Great-Britain ; which, if true, shows it to be of a very modern date ; and from a chart of the fatal diseases, &c. in London, collected and published by Dr. William Black, it appears, that it has been gradually declining in that city these seventy or eighty years past ; particularly from 1702 to 1717, (a period of fifteen years) there died of the Rickets 3916 ;  
and



and that from 1762 to 1777, (another period of the same length) there died only 104. All these observations seem to indicate an utter extinction of this scourge of infants.

ANOTHER is the the Colica Pictonum, or Dry Belly-Ach, as it was commonly called. This painful and distressing complaint, till about twenty-four or twenty-six years ago, was so frequent, that it was no uncommon thing to have six or eight patients, or more ill of it in a winter, the season in which it mostly prevailed, though it was not confined to cold weather: But now, for these twelve or fifteen years back, I imagine there have not been five persons ill of it in this town, if we except a very few who dealt in lead, and who it was evident derived their disease from that source, such as painters, &c.

THIS species of Colic was formerly attributed to hard drinking ; and it is certain that persons addicted to spirituous liquors were generally the subjects of it ; but its rare appearance now cannot be owing to an increase of temperance, for I fear it is a melancholy truth,

that intemperance is as prevalent at this period as it has been these forty years.

QUERY? Can this difference be accounted for from the very general difuse of pewter? Formerly the moſt uſual drinking veſſel in the houſes of the poorer claſſes of people, was a pewter quart-pot, and thoſe made uſe of in eating, ſuch as plates, porringers, &c. were of the ſame material; which, when not frequently ſcowered are apt to be converted into ceruſs. But the uſe of pewter is now in general difuſe, and by the revolution of faſhion, its place is ſupplied by more modiſh ſtone ware, called *Queen's-Ware*.

BOTH the last mentioned diseases, I am informed, are more rare in some of the neighbouring towns than they are in this : as to others I have no information ; nor how the case is in the more distant parts of the country.

PERHAPS it would be interesting to enquire, what diseases have become extinct, or  
D                          very



very rare among us, and what new ones have succeeded in their room.

WE see no Intermitting Fevers generated here, though 35 or 40 years ago they sometimes occurred.

TYPHUS, both mitior and gravior of Dr. Cullen, were frequent with us from 25 to 35 years ago, especially in Autumn, and proved fatal to many in the vigour and prime of life; it is now comparatively very rare.

SCURVY is a disease we very seldom meet with: Sailors sometimes return from sea with it, and for the most part recover very soon; but I have never met with more than a very few instances of it generated here at home, in the course of my practice.

PUERPERAL Fever very seldom occurs here.

I SHALL conclude with observing, what I suppose must have been observed by all the elder Practitioners among us, that acute diseases

eases are much less frequent among us in this town, as well as much less fatal than formerly; and that Chronic diseases, particularly Phthisis Pulmonalis, have taken their place; and although our species descend to the grave by paths a little different from the old ones, yet they arrive at it no faster than formerly, as our bills of mortality, in proportion to our numbers, are by no means increased.

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BILL of MORTALITY, for the  
Town of SALEM, for the year 1786.

D E A T H S.

January,	-	7	July,	-	12
February,	-	12	August,	-	12
March,	-	13	September,		12
April,	-	13	October,	-	10
May,	-	17	November,	-	6
June,	-	12	December,		13
					<hr/>
Total,					139

D I S E A S E S.



## D I S E A S E S.

Inflammatory Fever,	2	Trismus Infantum,	1
Slow Nervous Fever,	4	Convulsion	3
Mixed Fever,	5	Palsy,	2
Hydrocephalic Fever,	1	Insanity,	1
Anomalous Fever,	5	Asthma,	1
Inflammatory Quinsy,	1	Hooping Cough,	13
Putrid Quinsy,	3	Dropfy, viz.	
Inflammation in the Thorax,	4	Anasarca,	2
Angina Pectoris,	1	Ascites,	2
Inflammation in the Abdo-		Pulmonary Consumption,	20
men,	1	Hectical Decay,	7
Empiema,	1	Atrophy,	6
Cholera Morbus,	2	Cancer,	1
Cholera Dysenterica,	9	Worms,	2
Dysenteria,	3	Apthæ,	2
Diarrhœa,	2	Still-Born,	6
Lienteria,	2	Casualties, viz.	
Colic, viz.		Murdered,	1
Ileus,	2	Executed,	1
Spasmodic,	1	Drowned,	1
Calculi,	1	Diseases unknown,	17
			<hr/>
Total,			139

OF which ten were infants, within the month.

FROM other bills of mortality published in the Memoirs of the American Academy of Arts and Sciences, it appears that the number of births exceeds that of the deaths in the proportion of two to one.

M E T E-

# METEOROLOGICAL OBSERVATIONS, Made at BOSTON, A. D. 1790.

For J A N U A R Y.

## THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	39°	38° 5'	On the 6th the mercury was down at 50°. It had been as high as 52 at 1 P. M. only two days before, viz. on the 4th.
15th.	25°	26°	
28th.	38°	32°	

For F E B R U A R Y.

## THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	27°	36°	On the 10th the thermometer was down to 7 decimals above 0—at 7 A. M. which was the lowest, and on the 25th it was as high as 39 at the same time of day.
15th.	30°	44°	
30th.	18° 5'	36°	

For M A R C H.

## THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	19°	31° 5'	The lowest this month was on the 9th, when the mercury was only two degrees above 0. The highest was 50, on the 6th.
15th.	32°	36° 5'	
30th.	32°	42° 5'	

For A P R I L.

## THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	32° 5'	50°	Highest degree of heat this month was 70 at 1 o'clock, P. M. on the 4th day. The lowest was 27 on the 8th.
15th.	41°	43°	
30th.	42° 5'	58°	

For M A Y.

## THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	49° 0	67°	The highest degree of heat this month, at 1 o'clock P. M. was 80 on the 10th. The lowest was 41 on the 6th.
15th.	52°	59°	
30th.	52°	64°	

For



( 30 )

For J U N E.

THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	56°	65° 5'	Highest was 88 on the 19th, 1 P. M.
15th.	68°	78°	Lowest 55 on the 4th, 8 A. M.
30th.	63°	71°	

For J U L Y.

THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	69°	75°	Highest degree of heat 92, at 1 o'clock P. M. on the 7th. Lowest at 8 A. M. 58 on the 20th.
15th.	69°	83°	
30th.	67° 5'	80°	

For A U G U S T.

THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	63°	70°	Highest degree 92 on the 16th, at 1 P. M. Lowest 53, at 8 A. M. on the 24th.
15th.	72°	76°	
30th.	64°	84°	

For S E P T E M B E R.

THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	58°	70°	Highest 85 at 1 P. M. on the 2d. Lowest 39, at 8 A. M. on 24th.
15th.	55°	68°	
30th.	53°	56°	

For O C T O B E R.

THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	46°	62°	Highest degree of heat 74 on the 6th 1 P. M. Lowest 26, on 27th 8 A. M.
15th.	50°	60°	
30th.	49° 5'	66°	

For N O V E M B E R.

THERMOMETER.

Days.	7 A. M.	1 P. M.	
1st.	35°	60°	Highest degree of heat on the 1st 60. Lowest on the 26th, 15. Winds amazingly variable.
15th.	45°	58°	
30th.	24° 5'	33°	

For

## For D E C E M B E R.

## THERMOMETER.

Days.	7 A. M.	1 P. M.	Highest degree of heat was 40 at 1
1st.	17°	35°	P. M. on the 11th. Lowest 2 deci-
15th.	15°	22° 5'	mals above 0, on 8th, 9th, and 18th.
30th.	7° 5'	13°	
At 9 at night below 0.			

## R E M A R K S.

IN New-Hampshire, which is situated between the 42 and 45° of north latitude, the land near the sea is generally low ; but farther in the country it rises into hills, and in some parts, is very mountainous. The highest part of a ridge of mountains in it, which extend N. E. and S. W. are called the *White Mountains*. These mountains are estimated to be 9000 feet above the level of the sea, and are covered with snow and ice nine or ten months in the year, during which time they exhibit that white appearance, from whence they have derived their name. From their summit is exhibited an amazing view, extending 60 or 70 miles in every direction—And though more than 70 miles within land they



they may be discerned many leagues off at sea, from whence they appear like an exceeding bright cloud in the horizon. Three of the largest rivers in New-England receive a great part of their waters from these mountains.

THE ground is generally covered with snow the greatest part of the winter : Rain falls but seldom during that season.

THIS state embosoming a number of very high mountains, and lying in the neighbourhood of others, whose towering summits are covered with snow and ice three-quarters of the year, is intensely cold in the Winter season.

THE heat of its Summers, though of short duration, is also intense, especially about noon and a little while after.

CONNECTICUT river passes through the western parts of this state.

PORTSMOUTH, its metropolis, stands on  
3 the

the S. E. of Piscataqua river, about 2 miles from the sea, and contains about 600 houses, and 4400 inhabitants. This is the only port in the state.

THERE are many small streams of water in the state, issuing from the ponds and swamps in the valleys. There are also several small lakes, and one near the center of it about 20 miles in length, and from 3 to 8 in breadth.

“ MASSACHUSETTS is watered and fertilized by the following rivers, viz. Merrimack, Charles, which rises from five or six sources, Motherbrook, Taunton, whose source is from the Blue Mountains which lye back of Milton and Braintree, and forms the principal drain of the country lying east of these mountains; Concord, formed of 3 branches, one issuing from Framingham pond, the other two from Marlborough mountains; Mystic and Medford empty into Boston harbour; Ipswich empties into the Atlantic at the town of Ipswich; Westfield empties into Connecticut river at Springfield; the  
E
Chicabe



Chicabe empties into the same. Deerfield river rises in Vermont, and passes through a large tract of most excellent meadow ; this empties into Connecticut river.

“ BOSTON, the capital of Massachusetts, contains about 1800 houses, and, according to a late computation, 14,640 inhabitants ; of these 6578 were males, and 8070 females.”

“ THERE are a great many pleasant towns both maritime and inland, in Connecticut. The capitals of the state are, the cities of Hartford and New-Haven. The former is situated at the head of navigation on the west side of the majestic and spacious river Connecticut, about 15 miles above its entrance into the Sound : The number of houses do not exceed 300. New-Haven is situated at the head of a bay, on a plain circumscribed on three sides by high hills—and is bounded east and west by two small rivers,” contains only 500 dwelling houses made of timber. The number of males in the whole state exceeded the number of females by 1570 ; but  
in

in New-Haven there were found in 1787, to be 49 females more than males.

*The following is an Account of the DEATHS which happened at Salem, (situate 15 miles north east of Boston, and which contains about 6000 Inhabitants), from January 1st, 1790, to January 1st, 1791.*

January 17th,	under 2	years	62
February 10th,	between 2 and 5		24
March 7th,	5	10	9
April 8th,	10	20	3
May 22d,	20	30	25
June 20th,	30	40	12
July 19th,	40	50	14
August 30th,	50	60	8
September 24th,	60	70	10
October 13th,	70	80	16
November 11th,	80	90	5
December 15th,	90	100	2
		103	1
Dead born,			5
			<hr/> 196

OF which 106 were males, 90 females—  
11 negroes and 3 Indians are included.

ABOUT



ABOUT 1 in 70 dies annually in New-Haven.

THE Small-Pox, by the vigilant execution of the laws subsisting in the several New-England states, has never prevailed generally among the inhabitants, except in Boston, where it was epidemical, A. D. 1649, 1666, 1678, 1689, 1702, 1721, 1730, 1752, and in 1764, and where the success attending inoculation, though at that time in its infant and imperfect state, became incontestibly evident.

IN New-York, Pennsylvania, &c. the like precautions have not been taken, and the Small-Pox has been often epidemic there, especially in their capital towns—and inoculation has been practised with almost incredible success, whenever the cold and abstemious regimen has been observed, notwithstanding the too liberal and injudicious use of mercury. Since the practice of giving mercury has been growing into disrepute, and another more simple, consisting principally of mild laxatives, vegetable diet, and exposure

exposure to a colder temperature than usual during the eruptive Fever, there is scarce an instance of one in a thousand dying of this disease.

\* A. D. 1721, the number of individuals in Boston was 10,567, at which time the disease was very common. The number of those who died of it was 844, which was, according to Mr. Gales calculation in his Historical Memoirs, about one in seven. At this time only 286 were inoculated in and about Boston, whereof 6 died, i. e. 1 in 48. This was the first introduction of inoculation into America. It was introduced into London about the same time by Lady W. Montague in the reign of George the 1<sup>st</sup>.  
A. D.

\* Though the reverend C. Mather, one of the principal ministers of Boston, recommended it to the physicians, to make the experiment of inoculation, when the mortality in the natural way was very distressing, they all declined it except Dr. Boylston, who began with his own children and servants: For this innovation he was considered as an impious person by the generality of his fellow-citizens, and suffered much in his interest on that account. Mr. Mather had read a favourable account of the operation in the Philosophical Transactions, communicated by Timotheus from Constantinople.



A. D. 1730—Of 4000, which had the disease in the natural way, about 500 died, i. e. in the proportion of 125 to every thousand. Of nearly 400 inoculated, 12 died, or about 1 of 33.

A. D. 1752, there was an exact account taken, by order of the magistrates of the town of Boston, and rendered upon oath, (in order to remove the prejudices and objections made against inoculation) of all who had the small pox, either in the natural way, or by inoculation, and of the precise number of those who died of it in either way : By this account it appears that the number of those who had the disease in the natural way, including blacks, amounted to 5544; of which number there died, including blacks, 574—The whole number inoculated, including blacks, was 2113, of which 30 died. At this time all present had the Small-Pox, except about 174; the total of residents at that time (including 1544 negroes) was 9710. Those who fled to escape the Small-Pox were estimated at 1800.

IN 1764, of 3000 inoculated patients, only  
ly

ly 5 died, and these were children under five years of age.

THREE hospitals were afterwards erected in different parts of Massachusetts, for the purpose of receiving patients desirous of being inoculated, and regulated in such manner, as to prevent the infection from spreading, or being communicated to any of the rest of the inhabitants, as was expected; but through some trespass of the rules, and the refractory disposition of some of the patients, the whole utility of the institution was frustrated: Whereupon the law permitting inoculation was repealed, and another passed prohibiting it under severe penalties. Since that time, any person who has the misfortune to enter that state with the disease, or any of the infection adhering to his apparel or goods, and any one is thereby infected with the disease, he is liable to pay to the party so infected treble damages and costs of suit.

THUS the practice of inoculation for the Small-Pox stands wholly interdicted within



the New-England states, and the inhabitants are deprived, through a mistaken policy, of rendering one of the most formidable and loathsome diseases mild and harmless.

O F

OF THE  
CLIMATE AND DISEASES  
OF  
NEW-YORK.

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THE diseases which occur in the several parts of this state, differ so little in number, nature, and causes, from those of the New-England states, that I think it unnecessary to enumerate any except those peculiar to the fashionable and luxurious.

“ THIS state extends from the 40 to the 45th degree north latitude, is bounded south eastwardly by the Atlantic ocean; east by Connecticut, Massachusetts, and Vermont; north by the 45th degree of latitude, which divides it from Canada; southwest and south by Pennsylvania and New-Jersey. It is intersected in different parts by ridges of mountains,

tains, running in a north east and south west direction." These mountains occasion the winds in winter to be very cold and piercing, (for the air on mountains is always cold in proportion to their height.)

THE difference between the constitutions of the inhabitants of the city and country parts of New-York is almost incredible. Inflammatory diseases are much less frequent in the city than in the country, and in general are much less rapid and violent in their progress than formerly: Nor do they admit of the same antiphlogistic method of cure which is found necessary with people whose occupations require exercise in the open air.

AN active farmer, with an acute rheumatism, often requires the loss of 60 or 70 ounces of blood in the course of the disease; but the citizen, confined to a sedentary occupation, can seldom bear half that quantity.

THE citizens are affected with a numerous train of Nervous complaints, of which the inhabitants of the country have no idea.  
These



These appear to influence all their other complaints. Great numbers of them are enfeebled and enervated; and it is not uncommon to observe high degrees of irritability under the external appearance of firmness and vigor.

THE Hypochondria, Palfies, Cachexies, Dropsies, and all those diseases which arise from laxity and debility are at this period endemic not only in New-York, but also in Boston, Philadelphia, and Baltimore; and the Hysterics, which used to be peculiar to females, as the name indicates, now attacks many of both sexes indiscriminately. It is evident that so great a revolution in the constitutions of people could not be effected without the concurrence of many causes. Among the principal of these may be ranked, sedentary occupations, the intemperate use of spirituous liquors, and the daily use of strong tea.

THAT a strong infusion of hyson tea is an exceedingly powerful stimulant to the Nervous system, and intoxicates like spiritous liquors, must be manifest to every one who has  
ever

ever observed a number of ladies assembled at a *tea table*. It is on its narcotic or intoxicating quality, that its pernicious effects depend.

BUT the greatest evils which contract the duration, and embitter the enjoyments of life, are derived from the sources of sloth, intemperance and irregular desires.

THE narrowness, irregularity, and confined situation of many of the streets and buildings in the city of New-York, render it much more liable to diseases than Boston, and notwithstanding its superior situation, it is more subject to sickness, during the Summer and Autumnal seasons, than Philadelphia. Whether its water, which is brackish and unpalatable, contributes to this circumstance or not, has never been satisfactorily ascertained.

THE narrowness and irregular form of its streets, the height of the houses, and the crowded

crowded manner in which they are built, occasion it to be insufferably hot in summer.

THE number of inhabitants in the whole state, in January, 1791, was computed to be 324,127, of which 18,000 were negroes. The number in the city was 27,000, besides strangers and sailors.

A COMPARATIVE view of the state of this city at present, with that which it exhibited 30 years ago, is flattering to the present age, particularly in the improvements in literature, architecture, elegance and politeness.

## TABLE of Meteorological Observations, for 1790.

For J A N U A R Y.

THERMOMETER.		
Days.	8 A. M.	2 P. M.
1st.	37°	42°
15th.	35°	36°
30th.	28°	34°

For



## For F E B R U A R Y.

## THERMOMETER.

Days.	8 A. M.	2 P. M.
1st.		
15th.		
28th.		

## For M A Y.

## THERMOMETER.

Days.	8 A. M.	2 P. M.	
1st.	45°	60°	Highest was 74, which was on the 24th.
15th.	55°	66°	Lowest was 45.
30th.	57°	63°	

## For J U N E.

## THERMOMETER.

Days.	8 A. M.	2 P. M.	
1st.	65°	68°	Highest was 80 on the 17th.
15th.	69°	75°	Lowest 57 on the 10th.
30th.	68°	73°	

## For J U L Y

## THERMOMETER.

Days.	8 A. M.	2 P. M.	
1st.	64°	73°	Highest 80.
15th.	70°	76°	Lowest 64.
30th.	70°	76°	

## For A U G U S T.

## THERMOMETER.

Days.	8 A. M.	2 P. M.	
1st.	68°	74°	Highest on the 14th, 85.
15th.	78°	82°	Lowest on the 20th, 64.
30th.	66°	70°	Prevailing winds, S. W.

For

## For SEPTEMBER.

## THERMOMETER.

Days.	8 A. M.	2 P. M.
1st.	66°	71°
15th.	62°	67°
30th.	60°	64°

## For OCTOBER.

## THERMOMETER.

Days.	8 A. M.	2 P. M.	
1st.	57°	60°	Highest 71 on the 4th.
15th.	57°	58°	Lowest 42 on the 11th.
30th.	54°	56°	

## For NOVEMBER.

## THERMOMETER.

Days.	8 A. M.	2 P. M.
1st.	50°	56°
15th.	47°	55°
30th.	32°	35°

## For DECEMBER.

## THERMOMETER.

Days.	8 A. M.	2 P. M.	
1st.	36°	40°	Highest 47.
15th.	29°	40°	Lowest 21.
30th.	35°	37°	

Of

*Of the CLIMATE of New-YORK.*

*The following is an Abstract of Dr. Mitchell's Remarks respecting the Climate of New-York.*

“ **I**T has been long known that the temperatures of countries are to be estimated, not merely by the distance from the equator, but also by their remoteness from the margin and level of the ocean.

“ **T**HE following facts will, perhaps, enable you to form some idea of the difference between this climate and some others under the same parallel.

“ **I**N July, 1788, the mercury in Farenheit's thermometer rose in my chamber in the city of New-York, as high as the 103d degree above 0. And in Februry, 1789 at Albany, it sunk to the 24th degree below 0, by the natural changes of the weather.

“ **L**IGHTNING, during Summer and Autumn, is very frequent, particularly near the  
3 islands



islands and sea coasts: And (for what reason I do not well understand) the thunder showers almost invariably come from the north west.

“ IT is remarkable that the flash will kill vegetables no less suddenly than animals, by depriving them of their excitability, or susceptibility of being excited by the stimuli necessary to life, rather than by destroying their organization; for animated matter becomes defunct in three ways: 1st. By a destruction of organization, as by mortal wounds. 2d. When the organization is intire, but its capacity to receive the impressions of stimuli is taken away, as by long exposure to fixed, or phlogisticated air, or by excessive electrical shocks; and 3d. Where the organ and capacity are complete, but where, however, no stimuli are applied, as in seeds and in eggs before impregnation, and in animals, not irrecoverably drowned, before resuscitation.

“ ON Long-Island, Indian corn is planted after the beginning or about the middle of May; and the new crop is fit for grinding in 150 days; but the same kind of grain brought

G from

from Nova-Scotia, grows here to maturity in 96 days, while that brought from Carolina, does not ripen in less than 190. Buck-wheat grows from the seed to perfection in 84 days.

“ FROST commonly occurs in every month of the year, excepting June, July, and August; and has now and then even happened in June and August. It comes frequently about the first of September; and I remember on the 4th of May, 1774, a considerable quantity of snow fell.

“ IN the Spring the blossoms of peach, apple, and other fruit-trees, and the sprouting foliage of plants, are often hurt by it; but from causes which I do not fully comprehend, it prevails most in low lands, valleys and plains\*.

“ DROUGHT of six or eight weeks continuance sometimes parch us, and again rain falls to the depth of five or six inches on a level, in four hours. Winds are very variable; the sea breezes, which blow from the south, are our warmest in Winter, and from the north west,

\* See this explained under the account of the Climate of Virginia.

west, our coolest in Summer. In the Winter the north west winds are the most boisterous and piercing: though the north east are generally attended with storms of snow and fleet.

“ THE abundance of melting snow and ice, which frequently overspreads the country, far and near, subjects those whose feet are exposed to the floppy colliquation, to Colds, Catarrhs, Coughs, and their consequences.”

MR. Kalm remarks, that at “ Albany the wind blows commonly from the south in Summer, and brings a great drought along with it. Sometimes it rains a little, after which the wind veers to N. W. blowing for several days from that point, and then returning to the south.” *See Kalm’s Travels, Vol. II. page 243.*

THE same gentleman informs us, that the cold is generally very severe on the river Hudson; at Albany, in the middle of winter, the ice is sometimes three or four feet thick.  
“ On the 3d of April, 1749, some of the inhabitants



bitants crossed the river with six pair of horses. The ice commonly dissolves here about the latter end of March or beginning of April. The water at this time, some years, rises three fathom higher than it commonly is in summer. The inhabitants make no use of stoves, and their chimneys are so wide as to admit a cart and horses to be driven through them.

“ THE water of the wells (continues Mr. Kalm) in this town was very cool, when I was there in June 1749, but had a kind of acid taste, which was not very agreeable. It also contained a number of little insects which were probably *Monoculi*: These insects were from one and an half geometrical line to four in length.”

MR. Kalm thinks this water not wholesome, but the inhabitants who drink it every day, do not feel the least inconvenience from it. Albany is about 146 miles from New-York.

“ THE Rheumatism and Pleurisy are the most common diseases in this part of America.

rica. Intermittents and Dysenteries are seldom heard of. The Phlogistic Diathesis is so prevalent, that the physicians use venæsection for almost every complaint, and at every season of the year.

“ THE excessive heat, however, which prevails here from the middle of July to the latter end of August, sometimes gives rise to fevers attended with very anomalous symptoms, which often baffle the sagacity of the most experienced practitioners.”

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*The following Information respecting the Diseases, depending on Climate and situation was communicated to the Author by Dr. John Jones of Philadelphia, formerly Professor of Surgery, &c. at King's College, New-York—\*at present Vice-President of the College of Physicians of Philadelphia.*

“ IN the Winter and Spring the following diseases are more or less epidemic every year in the city of New-York, viz.

“ Inflam-

\* DR. Jones died since the above was communicated.

“ Inflammatory Quinsy—The Suffocating Catarrh of children--The common Catarrh--Peripneumony---Pleurisy---Hepatitis, and Rheumatism.

“ THE Nephritis, Cystitis and Hysteritis, occur at all seasons.

“ THE epidemics of Summer, are only Cholera and Diarrhœa.

“ IN Autumn there seldom or ever occurs any epidemic which can be ascribed to the influence of the climate or situation, except Diarrhœas, accompanied with Griping; but these are rather sporadic than epidemic, except when a rainy Autumn succeeds a hot and dry Summer.” These Diarrhœas, however, according to Dr. Jones’s observations, frequently terminate in very dangerous Dysenteries.

HE has also sometimes observed Intermittent and Remitting Fevers to be very general after the autumnal equinox, when the season has been rainy; though there are  
no



no sources of Marsh Miasmata; neither marshy grounds, nor ponds of standing water within its vicinity. About a mile above the city there is one pond, from whence the city is supplied with fresh water ; but it is always pure.

“ THOUGH the diseases which are mentioned as occurring in Winter and Spring, are most common at those seasons, they also occur in some constitutions every month of the year.

“ THOSE diseases produced by luxury, debauchery, and idleness, are the same every where.”

OF THE  
D I S E A S E S

WHICH OCCUR IN

N E W - J E R S E Y.

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**T**HE diseases which occur in the eastern part of this state (which extends to the 41st degree of north latitude), where the land is elevated and dry, are the same with those of Pennsylvania, in similar circumstances; but in the west division of the state, as well as in the counties on the sea-coast, and the marshy bottoms along the numerous creeks with which it is supplied, the inhabitants are much more subject to Intermittents and Bilious complaints.

THE parts which are dry, sandy, and produce nothing but pine and spruce, are famous  
3 for





inflammatory complaints, in all countries and climates, if intense, and especially if preceded by hot weather. While heat and moisture combined, especially in situations not favourable for ventilation, commonly produce Intermittent or Bilious complaints.”

IT is from the situation and climate of countries that we are to compute the probabilities of enjoying health and prolonging life. In all the low marshy situations of this state, I know from personal observation, that the inhabitants are generally sickly, many of which are Leucophlegmatic and Dropsical--The women frequently Chloriotic, are generally pale, squalid, and have carious teeth: But in the high, dry, and mountainous parts, they are healthy and long-lived.

“ THE most unwholesome situations, and soils the most unproductive, may be rendered salutary by industry and art.

“ THE dykes and drains of Holland, which carry off immense quantities of water into the ocean, prevent or destroy one of the  
principal

principal sources of Fevers, the generation of Marsh Miasmata."

" DR. De Monchy, an eminent physician at Rotterdam, observes, that vapours and exhalations, driven by a land wind, seawards, are found salubrious or morbific, according to the quality of the soil, whether sandy, gravelly, loamy, or marshy ; yet the healthy state of some English men of war, under the command of commodore Mitchell, which lay at anchor in the channel, between South Beveland and the island of Walcheren, parts of the Province of Zealand, in both of which places the Fever raged alike among the natives and the English soldiers cantoned there, is a proof that the moist and putrid airs of the waters, mud and marshes, was dissipated or corrected before it reached them ; and that a situation open on all sides to the wind, is one of the best preservatives against the maladies of a neighbouring, low, and marshy country." De Monchy's Essay on the Causes and Cure of Diseases, in Voyages to the West-Indies, page 12.

THE Dyfentery prevailed in Salem, and  
the

the adjacent country, which borders upon the Delaware, and is very low and marshy, in September, 1788; but from its readily yielding to the cortex, in substance, combined with very small doses of species *e scordio cum opio*, it appears to have been intirely symptomatic, and not a primary disease; for, wherever it is a primary disease, and the griping and tenesmus are the leading symptoms, the disease can not be cured without repeated purging in the day time, and the exhibition of opium at night. Under such circumstances, the frequent exhibition of stimulating remedies, astringents, cordials, and opiates are generally injurious, and frequently fatal.

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*Extract of a Letter from Dr. P. MASHEAU,  
residing at Elizabeth-Town, (communicated  
in 1791.)*

“ NOT a doubt remains with me, that the Dyfentery is not an inflammatory affection of the Bowels, as Akenfide and others have supposed, but a contagious Fever,



ver, accompanied with frequent stools, severe pain and griping, followed by tenesmus.

“ THE places where this malady is most frequently observed are morasses; and the bowels are particularly disposed to be affected by it, where people make use of fermentative liquors too freely: For instance, near this place there is a little village called Springfield, where the inhabitants (who drink large quantities of Spruce beer) are very subject to this disease, after the middle of August; which, I am persuaded, in conjunction with the relaxing effects of their local situation, is the principal cause of their being so subject to it.

“ I HAVE never seen any harm done by the *Purpurea Digitalis* in any species of Dropsy; on the contrary, I have exhibited it lately, in form of *extract*, with very great success.

“ I TRIED its virtues on a patient in a very debilitated condition after the operation of the paracentesis. The bark of Peru was given along with it, which, together with the  
exercise

exercise of riding on horseback, prevented any farther accumulation of water, and effected a cure. But unless the *Digitalis* is assisted by exercise and tonics, &c. it is seldom of much avail.

“ I HAVE never seen the *Hydrocephalus*, you mention, cured subsequent to symptoms of *Strabismus* occurring, but have three times seen it cured prior to the occurrence of this symptom, by the *Ung. Merc.* rubbed on the skin covering the *Carotids*, in large quantities. Worms are, no doubt, a frequent cause of Fever; but, at the same time, are of advantage by the irritation they produce on the absorbent system. I have never seen the *Tetanus* cured by *Dr. Rush's* method; but cured two patients lately with opium and mercurial ointment.”

“ THE *Typhus* is never generated in this town to my knowledge, nor do I recollect to have met with a case of Fever that was contagious since my residence here.

“ LOCAL affections are the exciting causes  
of

of the Inflammatory Fever, as appears from the ceasing of the fever, so soon as either resolution or suppuration has taken place.



OF THE  
SITUATION,  
CLIMATE, AND DISEASES  
OF  
PENNSYLVANIA.

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THIS state is situate between  $39^{\circ} 43'$  and  $42^{\circ}$  north latitude; peninsulated by six considerable rivers, whose numerous branches supply it with inexhaustible streams of the purest water.

THE ground rises almost imperceptibly as we proceed westward, for more than 200 miles; after which it becomes very mountainous and rocky, and so continues, till we pass the great range of the Alleghany, from whence to the gently flowing Ohio, the  
3 ground

ground is very much broken and uneven ; being a repetition of ridge after ridge, but no mountains.

THERE are very few tracts of swamp or marshy ground in this state, except along the Delaware and Susquehanna. The greatest part of the state is divided into small plantations, which, in general, are in a tolerable, but by no means in a perfect, state of cultivation.

PHILADELPHIA, at present the metropolis of the United States, when the last census was taken, contained 42,400 inhabitants, including all ages, sexes, and descriptions ; and 6651 dwelling-houses, exclusive of stores and work-shops, &c.\*

THE situation of this city, between the rivers Delaware and Schuylkill (whose waters are preserved fresh and pure by the motion of the tides), is elevated and delightful.

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THE

\* Vide Philadelphia Directory, by Clement Biddle, Esq.

\* THE streets are so arranged as to favour ventilation, and to admit a free circulation of air through every part†. They are also preserved dry and clean; the dirty water and filth being conveyed by aquæducts under ground, or by common sewers, into the river.

THE neck of land which lies below the city between the two rivers, though it is low and flat, is preserved from being overflowed by the tide-waters, by banks; and the rain water which falls upon it is prevented from stagnating and becoming putrid or mephitic by numerous drains. This tract of ground is also converted into immensely productive meadows, by the art of cultivation.

*An*

\* A few nuisances are still suffered to remain in it, such as slaughter-houses, tan-yards, and grave-yards.

† The narrowness of the streets, however, occasion a great increase of heat in Summer, in consequence of the reflection of the sun from the stone pavements, walls, &c. and it is too remote from the ocean to be refreshed by sea-breezes.



*An ACCOUNT of the Quality of the WATER  
at PHILADELPHIA.*

THE greatest part of the pump-water of Philadelphia, which is the only kind that is drank or made use of for tea-water, or culinary purposes by the inhabitants, is impregnated with felenite, or a combination of mineral acid with calcareous earth.

WHEN this water boils, a whitish powder is separated from it, which forms a crust on all the vessels in which it is frequently boiled.

THIS water is called hard, because it does not mix uniformly with soap, but curdles or runs into flakes.

A SMALL quantity of the sal. tartari, or clean dry pot-ash, added to this water precipitates the felenite contained in it. Ten or fifteen grains are commonly sufficient to precipitate what is contained in a pint. The exact proportion may always be found by adding

ding a few grains from time to time till it ceases to occasion white clouds.

THIS water is very disagreeable to the palates of most people who reside at a distance from the city, and is sometimes offensive to their stomachs and bowels. But custom has rendered it both agreeable and wholesome to the inhabitants ; so that they have not a wish for any other.

IT is a common opinion that water impregnated with calcareous earth, or any stony matter, subjects those who make constant use of it to the Stone or Gravel. But whatever other mischief these waters may have to answer for, they are innocent of this. For very few, comparatively, of the inhabitants of this city are troubled with that disease. Besides, there are numerous circumstances recorded which prove, that calculous concretions in the kidneys and bladder are all of an animal origin, intirely different from every species of fossil stone in every thing except the name.

THERE

THERE are several medicinal springs in Pennsylvania impregnated with iron, but none with aerial acid, or fixed air, as yet known.

THOSE most noted are, one called Harrowgate, four miles from Philadelphia—one at Bristol, on the river Delaware, twenty miles above the city—one in Chester county, called the Yellow Spring, about thirty-two miles from the city.

BRISTOL and the Yellow Spring are much neglected for want of suitable accommodations ; but Harrowgate, where the entertainment and accommodations are tolerable, is much frequented, though it is by no means so strong a Chalybeate as either of the others.

THAT the yellow Spring, in Chester county, is strongly impregnated with iron, is rendered certain by the following circumstances : The conduits, or canals, through which the water passes, are lined with a yellow scum like ochre, as well as the basins  
and



and reservoirs into which it is received. This yellow matter, collected, washed, dried, and thoroughly roasted over a strong fire, is capable of being attracted by the magnet; and, when sublimed with sal ammoniac into flowers, and afterwards dissolved in spirits of wine, affords a bright and styptic tincture of iron. Other concurring remarks of their chalybeate nature, are likewise afforded by the purple colour they make when mixed with a strong infusion of green tea, and of a blacker colour with powder of galls, and the iron mould they occasion upon linen—The same dried scum, being digested in volatile alkaline spirits, will occasion a blue colour when mixed with common water. These waters also impart an astringent or styptic taste to the tongue—these are all certain characteristics of a fine irony rust, or the real and material existence of iron in these waters.

FROM the sensible quality of these waters they appear to be perfectly neutralized, for they have not the least taste of acidity.

CHEMICAL experiments prove that no  
metals

metals are soluble, or can possibly enter the composition of water, unless the metal be first dissolved or converted into a salt, or vitriol.

OF all the metals there is none that dissolves so readily, in all kinds of acids, as iron. Thus pure water itself, on account of the fixed air, or aerial acid, which enters its composition, soon dissolves, and forms a union with this metal. A piece of red hot iron, quenched in water, communicates an astringency to it; and it is a familiar observation, that the moisture of the air, rain, &c. corrodes iron, turns it into rust, and impregnates itself therewith. In the same manner all springs which wash the beds of iron ore, or pass through red clay grounds, become impregnated with iron\*.

*Of*

\* Those chalybeate waters, in which the impregnation of fixed air, now called the aerial acid, predominates, are the best. An artificial mineral water of this kind may be made by dissolving one grain of sal martis, in a pint of spring water, and impregnating it with fixed air, from a mixture of oil of vitriol and chalk, by means of Nooth's machine.

*Of the CLIMATE of PENNSYLVANIA.*

*The following Account of the Climate of Pennsylvania, is extracted principally from the Observations of Dr. Rush.*

THE river Delaware was frozen over near three months during the Winter of 1780: The thickness of the ice in the river, near the city of Philadelphia, was from 16 to 19 inches, and the depth of the frost in the ground was from four to five feet, according to the exposure of the ground and the quality of the soil.

IN the month of January, the mercury stood for several hours at 5 degrees below 0, in Farenheit's thermometer, and during the whole of this month it never rose, except one day in the city of Philadelphia, to the freezing point.

“ THE cold of the Winter of 1783—4 was as intense, but not so steady as that of 1780—A thaw took place in January, this  
 2 year,



year, which rendered the Delaware navigable for a few days.

THE Summer which succeeded the Winter of 1780, was uniformly warm. The mercury in the thermometer, during this Summer, stood on one day, the 15th of August, at  $95^{\circ}$ , and fluctuated between  $93$  and  $80^{\circ}$  for many weeks. The thermometer stood in the shade in the open air.

THERE are seldom more than 20 or 30 days in Summer or Winter, in Pennsylvania, in which the mercury rises above  $80^{\circ}$  in the former, or falls below  $30^{\circ}$  in the latter season.

THE warmest part of the day, in Summer, is at 2 o'clock in ordinary, and at 3 in the afternoon in extremely warm weather.—From these hours the heat gradually diminishes till the ensuing morning.—The coolest part of the 24 hours is at the break of day.

THERE are seldom more than three or  
K four

four nights in a Summer, in which the heat of the air is nearly the same as in the preceding day.—After the warmest days, the evenings are generally agreeable, and often delightful.—The higher the Mercury rises in the day time, the lower it falls the succeeding night. When the Mercury is at  $80^{\circ}$  it generally falls to  $68^{\circ}$ ; while it descends when at  $60^{\circ}$  only to  $56^{\circ}$ . This disproportion between the temperature of the day and night in Summer, is always greatest in the month of August. The dews at this time are heavy in proportion to the coolness of the evening: They are sometimes so considerable as to wet the clothes; and there are instances, in which marsh-meadows, and even creeks, which have been dry during the Summer, have been supplied with their usual waters, from no other source than the dews which have fallen in this month, or in the first weeks of September. There is another circumstance connected with the one just mentioned, which contributes very much to mitigate the heat of Summer; and that is, it seldom continues more than two or three days very great without being succeeded by showers of

1

rain,

rain, accompanied sometimes by thunder and lightning, and succeeded by a north west wind, which produces a coolness in the air, that is highly invigorating and agreeable.

THE warmest weather is generally in the month of July, but intensely warm days are often felt in May, June, August, and September, (particularly in the two last mentioned months.)

THE transitions from heat to cold are often very sudden, and sometimes to very distant degrees. After a day in which the mercury has stood at  $86^{\circ}$  and even  $90^{\circ}$ , it has sometimes fallen, in the course of a single night, to the 65th and often to the 60th degree. In a Summer month, in the year 1775, the mercury was observed to fall  $20^{\circ}$  in an hour and an half. The weather is equally variable during the greatest part of the Winter\*. The mercury  
fell

\* " The weather on the west side of the great range of mountains, collectively called the Alleghany Mountains, is much more temperate and regular than on the east side. The inhabitants never feel those quick transitions of the wind from  
north



fell from 37 to  $4\frac{1}{2}^{\circ}$  below 0, in 24 hours, between the 4th and 5th of February, 1788.

THE rivers Delaware, Schuylkill, and Susquehanna, have been frozen so as to bear horses and carriages of all kinds ; and thawed, to be passable in boats, two or three times in the course of the same Winter.

DEWS begin to fall very copiously in August.

THE time in which frost and ice begin to shew themselves in the neighbourhood of Philadelphia, is generally about the latter end of October, or beginning of November ; but the intense cold seldom sets-in before the 20th or 25th of December. The coldest weather is commonly in January. A cold day in Winter is often succeeded by a moderate evening.

THE

north and south, as those so frequently experience, who live eastward of the mountains, and near the sea. The hot southwardly winds become chilled by passing over the long chain of these mountains." *Morse's Geography.*

THE greatest degree of cold which has been observed at Philadelphia, within the last 20 years, is  $5^{\circ}$  below 0 ; and the greatest degree of heat upon record, in the same place is  $95^{\circ}$ .

THE standard temperature of the air is  $52\frac{1}{2}$ , which is the temperature of our deepest wells ; as also the mean heat of the common spring water.

THE Spring in Pennsylvania, is generally less pleasant than in many other countries. In March, the weather is stormy, variable, and cold. In April, and sometimes in the beginning of May, it is moist, and accompanied by a degree of cold, which has been called rawness, and which, from its disagreeable effects upon the temper, may be called the *Sirocco* of this country.

THE month of May, in 1786, will long be remembered, for having furnished a very uncommon instance of the absence of the Sun for 14 days, and of constant damp or rainy weather.

THE

THE month of June\* is the only month in the year which resembles a Spring month in the southern countries of Europe. The weather is then generally temperate, the sky is serene, and the verdure of the country is universal and delightful.

THE Autumn is the most agreeable season of the year in Pennsylvania. The cool evenings and mornings, which generally begin about the first week in September, are succeeded by a moderate temperature of the air during the day. This weather continues with a gradual and almost imperceptible increase of cold, till after the middle of October: After which more rain falls, and coldness succeeds. The indians predict the cold of Winter from the quantity of rain which falls during the Autumn†."

IN Winter the winds generally come from the

\* June, 1791, was an exception to these observations, for the heat was intense, and had been so from the latter end of May. The wind blew constantly from the S. and S. W.

† The greater the moisture, the greater will be the evaporation, and the greater the evaporation, the greater will be the coldness of the atmosphere.



the north west in fair, and from the north east in wet weather. The former are uncommonly dry as well as cold, the latter are insufferably cold and moist.

THE winds in fair weather in the Spring, and in warm weather in the Summer, generally blow from the south west, and from west north west. The south west winds frequently bring with them refreshing showers, and moderate the heat of the weather, particularly when succeeded by a north west wind.

THE dissolution of the ice and snow in the Spring, is sometimes so sudden as to swell the creeks and rivers in every part of the state, to overwhelm large tracts of land in their vicinity, and destroy the crops of the disappointed farmer and grazier. The wind at these times commonly comes from the south west.

\* IT is a prevailing opinion, that the extremes

\* It appears from Mr. Kalm's Travels, that the Winter ser  
ia

extremes of heat, moisture, and cold, are annually diminishing in this state, by the clearing of woods, draining of swamps, and other arts of cultivation.

“ THOUGH the Sun (says Doctor Hugh Williamfon) is doubtless the general source of heat, yet we observe that countries are not heated in proportion to their distance from the Sun, nor in proportion to their distance from the Equator. When the rays of the Sun strike the earth in a perpendicular direction, they will be reflected in the same direction on the particles of the air through which they have passed, and thus increase their heat.

“ A GREATER number of rays will likewise

in sooner formerly than it did when he was in America, which was from 1748 to 1751.

According to the account which he received from Isaac Norris, Esq; the river Delaware, when the English first settled in Pennsylvania, was commonly covered with ice about the middle of November, old stile; so that the merchants were obliged to clear out their ships before that time, for fear of the navigation's being obstructed if they delayed. On the contrary, adds Mr. Kalm, this river seldom freezes over, at present, before the middle of December, old stile. The Spring returns here much later than formerly.

wife strike the earth in that direction, than when they fall obliquely, hence the greater heat in that direction, *cæteris paribus*.

“AIR is observed to be heated to very different degrees in different countries, which are in the same latitude, according as they abound in rough mountains, fertile plains, or sandy desert, as they are surrounded by land or by sea, or according to the different winds which prevail in those countries. The temperature of Pennsylvania is very different from that of Portugal; and that of England is different from that of Saxony, on the neighbouring continent, though they are under the same parallels. In order then, to form a judgment of the climate of any country, we must not only consider the latitude of the place, but also the face and condition of the country, and the winds most prevalent there at the different seasons of the year; if any of these should change, the climate must also be changed more or less, for it is in a great measure governed by these.”

" THE surface of a country may be chan-  
L                      ged



ged by the arts of human industry in clearing its woods, draining off its waters, and levelling its mountains, (as is exemplified in China) where by these means the air, in very unfavourable situations, has been rendered exceedingly wholesome, according to the accounts of the observing Lind.

“ A TRANSIENT view of the cause of winds will convince us that their course may also be changed.

“ IT is well known that most winds are occasioned by the heat of the Sun.

“ WERE the Sun to stand still over any part of the surface of the earth, the wind would constantly blow to that place from all directions : For the air in that part being rarified by the heat of the Sun, would be expanded, and thus become specifically lighter, whence it would ascend, and the heavier air in the neighbouring parts, would rush into its place; this too being heated by the Sun's rays, and by the warm surface of the earth, would

would instantly ascend and give place to that which is colder and more dense.

“ BUT as the Sun moves, or seems to move between the tropics, from east to west, there would be a constant current of air feting towards the Sun from the N. S. and E. while the current, which would also come from the west, is prevented or turned back by the Sun, which moves with great rapidity in an opposite direction. The current, coming from the north and south, falls in with that from the east, and is presently bent in the same direction. This constitutes the *Trade Winds*\*, which are found in the Atlantic, and in the great South Sea.

“ WERE the surface of the earth homogeneous—were it all covered with water, or  
all

\* In the Gulph of Guinea the S. W. wind propels all the clouds, formed by marine exhalations, which float along the south coast of Africa, towards the land, and being compressed by them, against the mountains, it frequently occasions deluges of rain.

The continual easterly trade-wind, likewise, where its impetuosity is felt along the eastern coast of America, brings with it the like bad weather. *Muschenbroek.*

all smooth dry land, the easterly winds would always prevail quite round the globe to some distance beyond the tropics. But the waters along the equator are divided by two or three considerable portions of land, which retain the heat in a different manner from the water, and reflect the Sun's rays in very different proportions, so that they not only stop the easterly current of air, but often change it to the opposite direction. For along the westerly coast of Africa and South America, the winds commonly blow from the west; that is, they blow from a cold surface to that which is warmer, from the sea upon the land. In warm countries, or in the warm seasons of any country, the surface of the land is warmer than the surface of the water." [But the reverse is the case in cold countries, and in cold seasons of any country, without the tropics.]

“ The surface of the earth being immovably exposed to the sun, receives and retains the heat, and grows warmer by every additional ray. The surface of the sea is not soon heated., because the particles which are  
uppermost



uppermost this hour, will presently be overwhelmed by those that are colder, and these by others in succession."

"FROM these trite and general observations respecting the cause of winds, the reason is obvious, why north west winds prevail during the winter season, in a country lying, as this does, in a direction nearly from the N. E. to the S. W.—The surface of the earth at this season being always colder than that of the sea. To this may be added, that our coast is constantly washed by a current of warm water, which being driven to the west by the easterly trade winds near the equator, is checked in the gulf of Mexico, and forced to escape to the north eastward to give place to the succeeding current.

"LET us now enquire, whether any change of circumstances would reduce the violence of these north west winds, which prevail in Winter.

"IT has been proved by experiments, that hard and smooth surfaces, receive, retain,

tain, and reflect heat, better than those which are soft, rough, or unequal; and a clear, smooth, plain field, especially if sandy and dry, is observed to reflect more heat than one that is covered with trees, bushes, or grafs, and more particularly if the soil is moist."——It has also been discovered that a simple solution of water in air always produces a sensible increase of cold.

“ FROM these premises established on experiments and observation, it may be rationally concluded, that when in the course of time, this continent becomes populated, cleared, cultivated, improved, and the moisture of the soil exhausted far into the frozen regions of the north, that the bleak winds will become more mild, and the Winters less cold in the middle states, but more especially in those to the southward.”

“ WHAT Philosophy teaches us to expect in the present instance, appears to be confirmed by what has happened in the climate of Italy. The temperature of which, we are assured

affured from unexceptionable authority, is at present much more mild than it was when Virgil wrote his *Georgics*. This change of climate Dr. Williamson ascribes to the population and consequent culture which has gradually taken place in the more northern countries of Europe.

“ Perhaps it may be apprehended, that if the cultivation, and levelling a country, would mitigate the severity of the Winters, it would increase the *heat* of the Summers in a proportionate degree. But common observation, as well as the principles of Philosophy, shew that there is no foundation for such apprehension. For during the greatest Summer heats it is found, that the extraordinary heat of the atmosphere does not rise to any considerable height, and in the upper regions it is perpetually cold, both because the air in those regions is too remote from the earth to be warmed by the heat reflected from its surface, and because the air in those higher regions, not being pressed by such a weight of incumbent atmosphere, is too rare to be susceptible of a great degree of heat.”

“ HENCE



“ HENCE it is evident, that nothing is wanting, in the midst of Summer, to render the country agreeably cool, but a proper mixture of the cold air which is above, with the warm air below. This may be effected by any cause which increaseth the winds, such as showers of rain, thunder gusts, and the cooler air of mountains pressing towards more heated parts, to restore the equilibrium, agreeable to the established laws of matter and motion.

“ FROM all the circumstances which have been mentioned, there is no unreasonable prospect (and I am sure it is a very pleasing one), that when this country comes to be diversified by vast tracts of clear land, intersected by ridges of rude mountains, the land winds in summer, to say nothing of those which come from the sea, or from the lakes, charged with moisture, must certainly be much purer and salutary, as well as temperate and uniform, than they are at present.”

“ SHOULD that delightful æra ever arrive, how glorious, how enviable, will be the lot  
 I of

of the Americans “ did they their blifs but know”—For whom the earth pours forth with liberal hand, her choicest stores\*.

NOTWITHSTANDING what has been said in favour of the prospect of a change of climate for the better in the United States, it must not be concealed, that it has been confidently asserted by gentlemen of extensive geographical knowledge, that no such change has taken place in the climate of China, the capital of which, Pekin, is situated in latitude  $39^{\circ} 54$ , which is nearly the same degree of latitude, and on the same parallel with Philadelphia, though almost the whole extent of country north of it is cleared, and in a state of the most perfect cultivation.—The greatest cold experienced there in the

M course

\* In this favoured portion of the world, we have already, in a great measure, regained the native dignity of our species—We are exempt from the desolating effects of war ; we are under no oppression from misguided or intolerant religion ; we are strangers to those feudal institutions which have enslaved the greatest part of Europe, as well as to that accursed despotism which prevails over half the globe ; our laws are simple and just, though too much retarded in their execution ; our industry is unrestrained, and every thing prospers.

course of five years, was  $5^{\circ}$  below 0, the greatest heat was  $98^{\circ}$ ; but in July, 1773, the Mercury rose there to 108 and 110.—*Vid.* the quotation in Dr. Rufhe's account of the climate of Pennsylvania; and Kirwan's Estimate of the temperature of different Latitudes.

WE have incontestable proofs that heat does not altogether depend upon proximity to the equator, but varies at inconsiderable distances, chiefly according to the elevation of the ground, and the current of the winds, as also from the nature of the soil.

UPON these, the temperature of the climate, the colour, strength and activity, the constitutions and health, of the inhabitants greatly depend. And it is a fact, which ought to be known to every body, that in countries the most noted for sickness and mortality, and in the hottest climates, those who have it in their power to select elevated situations, where the soil is gravelly and dry, may enjoy good health, provided they lead temperate and regular lives, during every season



season of the year.—*See* Linds' Essay on Hot Climates.

ACCORDING to the observations of Mr. Reinhold Foster, it is not only the clearing of woods, but cultivation and population, that alter the climate of a country, and make it mild and temperate. “ The Romans looked upon the winters of Germany and England as very severe ; but happily both countries have at present a much more mild climate than formerly, owing to the three circumstances above-mentioned.

“ NEAR Peterburgh, under 60° N. L. the river Neva, was covered with ice in 1765, in the beginning of December, and cleared of it April 11th, 1766. At Tfaritsin, which is under 48° 40. N. L. the river Volga was covered with ice the 26th of November, 1765, and the ice broke in the river, April 27th, 1766 (all old stile). Is it not almost incredible, that in a place almost 12 degrees nearer to the south, the effects of cold should be felt longer and more severely than  
in

in the more northern climate ? And though the neighbourhood of Petersburg has a great many woods, the cold was, however, less severe and lasting : Tfaritsin, on the contrary, has no woods for many hundred miles in its neighbourhood, if we except some few trees and bushes along the Volga and its isles, and the low land along it ; wherever the eye looks to the east, there are vast plains without woods, for many hundred miles.

THE clearing a country of woods cannot, therefore, alone contribute so much to make the climate milder, but cultivation does more. “ In an hundred square miles near Tfaritsin, there is not so much cultivated land as there is within ten miles of Petersburg ; it is in proportion to the number of the inhabitants of both places, and this makes the chief difference of the climate. There is still another consideration ; Petersburg lies near the sea, and Tfaritsin in an inland country, and, generally speaking, countries near the sea have been observed to enjoy a milder climate. These few remarks will be, I believe, sufficient

ficient to enable every body to judge of the changes of the climate in various countries, which, no doubt, grow warmer and more temperate as cultivation and population increase.

MR. Kalm (in Vol. II. p. 249) says, the corn near Quebec, in Canada, formerly was never ripe till the 15th or 16th of September ; but that for some years previous to the year 1749, the harvest began in the last week of August (old stile).—The inhabitants also informed him, that formerly the corn never ripened ; but since the woods have been sufficiently cleared, the beams of the sun have had more room to operate, and it ripens perfectly.

“ SOME parts of Italy bear melancholy proofs of the alterations that accidental causes make on the atmosphere ; for the Campagna di Roma, where the ancient Romans enjoyed as salubrious air as is to be found on any part of the globe, is now almost pestilential, through the decrease of inhabitants, which has occasioned a stagnation of waters and putrid exhalations.”

*Of*



*Of the DISEASES of PENNSYLVANIA.*

**D**A I L Y observations convince us, that the diseases which occur in this state, are not very numerous or complicated, except in the city, where the greatest part of the inhabitants are employed in sedentary occupations.

THE diseases which occur in the country are generally of an inflammatory nature, and are most frequent the latter end of Autumn, and in the early part of Spring; these are often occasioned by unavoidable or imprudent exposure to cold and rainy weather, and by the neglect of changing wet and damp clothes for dry and warm ones; but more commonly by the neglect of putting on a Winter dress as soon as frosty weather begins in Autumn, and by the imprudent practice of changing warm and thick cloathing for a thinner and cooler dress too early in the spring: Even in the low and marshy situations, the richer inhabitants, who have dry apartments, and who  
live

live on substantial diet during the autumnal season, when Intermitting and Remitting Fevers are epidemic, are much less liable to be affected by the poisonous effluvia of the putrid soil than the poorer class, who are more exposed, and obliged to live abstemiously, and to go thinly clad. The poorer class of people, who reside in the towns and large villages (though labouring under all the disadvantages of indigence) where the impurities with which the atmosphere is charged, in consequence of the action of heat upon a moist soil, and the extrication of fixed air from decaying and putrid vegetables, is corrected by numerous fires, and ventilation is favoured by the arrangement of the houses into streets, are less subject to the disorders in question, than those who live in detached houses, or in the suburbs, where that advantage is wanting.

THE great and sudden changes which so frequently happen in the state of the weather, both in Summer and Winter, may be considered as the principal causes of the diseases  
of

of this state.—For it appears from Kirwan's Estimate of Climates, that there is no country in the known world, so subject to sudden and violent changes of weather as this.

*The following is a Catalogue of all the Diseases, depending on climate and situation, which occur at different seasons of the year, in this state, viz.*

*In* WINTER *and* SPRING.

*Phrenitis*, or inflammation of the brain ;  
*Optthalmia*, or inflammation of the eye ;  
*Erysipelas*, or inflammation of the skin ;  
*Odontalgia*, or tooth ach ;  
*Rheumatism*, { or inflammatory affection of  
the muscles and joints ;  
*Catarrh*, or taking cold ;  
*Cynanche Tonsillaris*, or inflammatory quinsy ;  
*Cynanche Trachealis*, or suffocating catarrh ;  
*Pleurisy*, or inflammation of the pleura ;  
*Peripneumony*, or inflammation of the lungs ;  
*Hepatitis*, or inflammation of the liver ;  
*Splenitis*,



*Splenitis, Nephritis, Cystitis, Hysteritis, &c.*  
*Gastritis*, or inflammation of the stomach,  
*Enteritis*, or inflammation of the intestines.

*In S U M M E R.*

*Colic, Diarrhæa, and Cholera.*

*In A U T U M N.*

*Intermitting Fever, Remitting Fever, and the  
Dysentery.*

INFLAMMATORY diseases, however, are not confined to Winter or Spring, but frequently occur at all seasons, especially to persons accustomed to daily exercise, in every kind of weather, and to free indulgence in animal food and spiritous drink.

THE Epilepsy, the Apoplexy, and the Palsy, occur more frequently the latter end of Autumn, and beginning of Winter, than at any other season. The Gout, occurs, more  
N frequently

frequently in the Spring and Autumn, than at any other season ; but there are very few people troubled with it at all here. Hemorrhages, are more frequent the latter end of Spring and beginning of Summer than any other time.

THE greatest number of the cases of Phthisis, Pulmonalis, which have come under my observation, have been preceded by Hemoptysis.

ALL the cases of Tetanus that I have hitherto seen, except one, were occasioned by laceration, or puncture of tendinous or muscular parts. The only case which ever came under my care, that was not occasioned by external injury, was occasioned by exposure to a N. E. wind, accompanied with rain, when the person was debilitated, in consequence of confinement, and the free use of Mercury.—This patient was a pilot by occupation, in the 32d year of his age, and had been much addicted to free and irregular living.—He was entirely deprived of the power  
of

of swallowing by the disease ; but was relieved in about 30 hours, in consequence of being put into a semi-cupium of water as warm as could be borne without injury by a person in health, and by emollient oily Glisters, containing 60 drops of Laudanum, repeated every six hours.

As soon as he recovered the power of swallowing, he took a bolus of opium, gr. ij. Tart. Emet. gr.  $\frac{1}{4}$  every six hours, with Snake-root tea, for two or three days ; after which he gradually recovered without any other medicine.

CONTAGIOUS diseases occur at all seasons, particularly the Small Pox, Measles, Scarlatina-Anginosa, Cynanche-Ulcerosa, or Putrid Quinsy, Typhus, Hooping Cough, Mumps, &c.

OF late years the Small Pox has never been entirely extinct in the city of Philadelphia : The Measles has been less constant : The Scarlatina has been epidemic here in the  
Autumn



Autumn and Winter, for some years past ; but at present, it is only Sporadic, viz. in October, 1791.

SOME one or more contagious disease, being always more or less prevalent in the city, is one reason why a greater proportion of children die annually in the city than in the country.

THE Influenza, or contagious Catarrh, has been epidemic in America three different times. The first time of its appearance that I can find recorded, was in the Autumn of 1733 ; previous to which it had spread over every country in Europe, beginning in the North of Germany. From Europe it appears to have been imported into America. It was again observed, and recorded particularly by Dr. Thomas Bond, in 1761. At that time its progress was traced from the West India islands to Halifax in Nova-Scotia, where it appeared in the Spring ; from thence it reached Boston, and the neighbouring states, and afterwards spread in a most rapid

rapid manner over the whole continent of North America, without being retarded in its progress by any alteration in the sensible qualities of the atmosphere or the course of the winds, till the month of July, after which it was no more heard of.

THIS disease made its appearance a third time in America, in 1789. It was first observed at New-York, in September, from whence it spread, in the course of six or eight weeks, over every part of the union, and passed to several of the West-India Islands ; but whether it proceeded to the Spanish settlements in South America, or whether the Aborigines of North America were affected by it, I have not been able to learn. Persons of all ages and descriptions were affected by it in Philadelphia ; and its contagious effects were so uncommonly rapid, that many supposed its cause was blended with, or suspended in the atmosphere, and conveyed by the winds ; but the analogy of every other species of contagion contradicts this supposition. Its continuance in Philadelphia was  
about

about six weeks : how it was generated, or from whence it was derived, I have not been able to inform myself. The origin of this disease appears to be as obscure as that of the Small Pox or Measles. The first account of its appearance in Europe, upon record, was in the year 1557, at which time its progress was traced from Asia to Constantinople, &c. The symptoms in general resembled the common Catarrh from taking cold ; but it differed from it materially in being attended, in most cases, with a considerable prostration of strength, and impaired vigour in all the functions of the body.

I was always guided in my practice by the symptoms present, and do not recollect a case that did not do well : The symptoms were so mild with multitudes, that they required no medicinal aid. In general, mild Antimonials, and the Antiphlogistic Regimen, were found serviceable ; and when the inflammatory symptoms subsided, Opium afforded relief to the Cough.

SEVERAL



SEVERAL were benefited by bleeding ; but in general the patients recovered sooner when it was omitted, except when Pneumonic symptoms ; such as acute pain, and full or hard pulse indicated it\*.

#### THE

\* The following is extracted from a Letter from Dr. Rush, respecting the periods in which the Influenza has appeared in America, dated Oct. 7th, 1791.

“FROM the most successful enquiries I have been able to make, I have found that the Influenza prevailed in this country in the year 1733. It was again epidemic in the year 1749. This last information I received *indirectly* from the late Dr. Barnet of Elizabeth Town ; who added, that the universal remedy for it among the common people, was a drink composed of a jill of vinegar, a pint of water, and two table spoonfulls of melasses. It appeared again in the spring of the year 1761, and was both violent and universal. I recollect all its symptoms perfectly, it being the first year I began the study of medicine. It was distinguished by the name of “this Cold,” and “the great Cold.” Dr. Gilchrist, takes notice of it in the Physical and Literary Essays of Edinburgh. Notwithstanding this epidemic was so universal as to check business in many places, and to exclude all other subjects of conversation, yet I was lately surprized to find only three of the citizens of Philadelphia, who had retained a distinct recollection of it. Dr. Shoest, in his travels through North America, mentions it upon the authority of the late Dr. Thomas Bond.

“THE Influenza made its next appearance in the Winter, 1770-1 ; an account of which I have preserved in my notebook

THE Hydrophobia is so rare an occurrence here that I have never seen a case of it. Dr. Rush and Dr. Percival have, in my opinion, thrown more light on the nature of this disease than any other writers.

THE accounts which have been published respecting the fascinating power of Snakes in this country, have originated in ignorance and credulity, and are entirely groundless ; as well as those tales which are often told of their breeding in the livers of Dogs which have been bitten by them.

THE experiments of the industrious and ingenious Fontana, of Tuscany, furnish ample proof, that the bite of the Viper is seldom

book, and have found it to agree exactly with the histories of the Influenza in this and other countries. I need not mention to you its appearance in the Autumn of 1789. My inquiries and observations satisfy me, that it appeared again in the Spring of 1790, and in the Winter of 1790-1. I shall not trouble you with a detail of the facts upon which I ground this assertion, as I have prepared a full account of them to be laid before the public in a 2d vol. of Medical Enquiries, which I am now preparing for the press."

dom fatal to men, or the larger class of animals, though it instantly kills small ones : hence a presumption arises, that the remedies employed by the Indians owe their credit to ignorance of this circumstance. According to the last quoted writer, the immediate application of Lunar Caustic, to a part bitten by a Snake, prevents it from having any ill effect : This produces an eschar, and a considerable wound, which is afterwards to be dressed with common Cerate.

FEWER diseases prevail in Autumn, when the ground is frequently refreshed by showers, and the ponds are replenished with water, than in dry ones. This circumstance is thus explained by Dr. Rush\*. “ While the creeks and rivers are confined within steady  
O bounds,

\* It is remarked by Dr. Percival, “ that wet seasons are generally more free from epidemic diseases, than dry ones. And that those years are most unfavourable to health, in which heavy rains fall about the beginning of Summer, and are succeeded by great and uninterrupted heats. For the earth being thus drenched with moisture, and the low lands overflowed with water, the exhalations become constant, copious, and often putrid.”

“ JOAN



bounds, there is little or no exhalation of febrile miasmata from their shores.” “ The dry Summers of 1780, 1781 and 1782, by reducing the rivers and creeks, far below their ancient marks, while the wet Spring of 1784 and 1785, by swelling them beyond their natural heights, have when they have fallen, left a large and extensive surface of moist ground, exposed to the action of the sun, and of course to the generation and exhalation of febrile miasmata.”

As tables of Meteorological Observations will be annexed, which will shew the variableness and vicissitudes to which the weather is liable in this climate, I shall add nothing farther on the subject here ; but shall now proceed to give an account of the diseases to which

“ JOAN LEO, in his history of Africa relates, that if heavy rains fall in that country, during the months of July and August, the Plague usually breaks out the September following. But in European climates, it is well remarked by Sir John Pringle, that frequent showers in Summer, cool the air, check the excess of vapour, dilute and refresh the corrupted waters, and precipitate the noxious effluvia, which float in the atmosphere.” Percival's Essays, 4th Edition, vol. 2d. p. 22.

which the inhabitants of Philadelphia are more particularly liable.

THE diseases to which the opulent and fashionable class of the men ; are most subject are these, viz. Apoplexy, Palsy, Epilepsy, Dyspepsia, Jaundice, Gout, Asthma, Hypochondria, Dropsy, &c.

THE ladies are most subject to the following, viz. Head-ach, *accompanied with sickness at stomach*, Spasmodic, Asthma, Hysteria, Dyspepsia, Hypochondria, Catarrh, Hemoptysis, Phthisis Pulmonalis, Colic, Menorrhagia, Abortion, Sterility, Melancholia, Chronic weakneses, &c.

DAILY observation teaches us, that the generality of the diseases just mentioned, to which men of fashion and opulence are most subject, proceed from excessive indulgence in the pleasures of the table, and in drinking wine and other liquors to excess, joined to the want of proper exercise—dosing away the salutary hours of the morning in bed ; re-  
spiring

spiring the confined air of a chamber ; and to discontent of mind for want of some interesting pursuit.

By the joint effects of intemperance and indolence, the digestion sooner or later never fails of being impaired. And as on the due performance of digestion, much of our health, ease, and prospect of longevity depends, we ought most studiously to avoid every thing that has a probable chance of interrupting it.

THE quality of Aliment most wholesome, may generally be determined by the experience of each individual : The principal inconvenience arises from quantity.

THE judicious Dr. Fothergill observes, that “ the Author of Nature, has so formed and constructed the organs of digestion, that we can gradually accommodate ourselves to every species of Aliment. A great part of the eastern world, subsists principally upon rice and other vegetables : many countries



tries live almost solely on fish ; others on a mixed diet of animal and vegetable substances, without suffering injury."

No kind of food hurts us, if gradually accustomed to it ; but this is not the case in regard to quantity. From errors in this, in a great measure, proceed the formidable progeny which have already been enumerated.

" IN a weak stomach, a large proportion of bread is indigestible ; it turns sour, produces Heart-burn, Flatulencies, Spasmodic pains, &c. Valetudinarians should therefore always use it with moderation."

IN Philadelphia animal food, of one kind or other, constitutes the chief part of our nourishment.

THAT there are some kinds of more easy, some of harder digestion than others, is well known to every body. The most difficult of these, will be digested without occasioning much disturbance, if taken in small quantities ;

ties ; but if a person eats as much of ham, salted beef or bacon, as he ought to do of fresh fish or chicken, he may, and generally will, suffer by it.

AFTER a plentiful dinner of animal food, it is now the custom here, to introduce deserts of rich Sweet-Meats, Custards, Jellies, and Fruits, and of various kinds ; all of which at such time is unnatural and improper, because of the extraordinary stimulus such a load of heterogeneous substances must give to the fibres of the stomach, both in a mechanical and chemical sense. “ By these means fresh labour is added to a tired digestion.” The rule where fashion cannot altogether be dispensed with, is carefully to observe, that the sum of all together, does not exceed due bounds, or encroach upon the first feelings of satiety.

WITH respect to strong liquors, the less in quantity, when in good health, the more consistent with the preservation of health and long life. The safest and most natural  
practice

practice is to drink as much wine and water, or any other agreeable fermented liquor, during the repast, as thirst or inclination may require, and then to dismiss the bottle entirely ; after which a dish of strong coffee may be introduced with propriety.

“ THE sick Head-ach, as it is called, is generally the consequence of an indigested meal, frequently of a heavy supper ; and for the cure, requires the occasional use of mild Pukes, laxatives of Rubarb with Columbo-root, and a strict attention to regimen and daily exercise in the open air in seasonable weather.”

THE diseases to which the women of fashion are most subject, in general, proceed from the opposite extreme : From too great abstemiousness in meats of a nutritive quality ; from wine, but especially from the want of exercise, while they indulge too much in regaling themselves with strong infusions of palatable, but noxious, Tea.

A CON-



A CONSIDERABLE number of their complaints also, proceed from the frequent changes of dress, and the alternate vicissitudes from heat to cold, to which fashion, and the love of pleasure, expose them. There are instances of young ladies in this city, who, for the sake of an elegant and admired shape, apply a leather bandage, dipt in water, round their waists every night when going to bed, which contracts as it becomes dry. The pernicious effects of this experiment must be evident to every person of common sense. They are also often injured by confined air.

“ THE plant in the green house, the Sheep in the cot, and the most admired Beauty beneath her gilded roof,” are equally injured by confined air.

FROM the best information which I have been able to obtain, more than one-fifth of all the children born in this city, die under two years of age—A considerable portion of these, fall victims to the contagious diseases which

which never cease to prevail ; but the greatest part die of Cholera, Diarrhæa, and Remitting Fever.”

MECHANICS who follow sedentary occupations, are particularly subject to Dyspepsia, Colic, Costiveness, Hæmorrhoids, Hypochondria, Œdema, Pain in the Thorax, Phthisis, Scurvy, Itch, Gravel.

“ OF all the causes which conspire to render life short and miserable, none has greater influence than the want of proper exercise.”

WHOEVER examines the structure and functions of the human body, must be convinced of this.

“ THE Body is composed of an infinite number of vessels, whose Fluids cannot be pushed on, without the action and pressure of the Muscles ; but if the Muscles remain inactive, the Fluids will stagnate, and obstructions will be formed, which cannot fail to occasion diseases. Both the sanguiferous vessels

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and

and the Lymphatics, are furnished with numerous Valves for the purpose of preventing the retrograde motion of their contents ; but without the assistance of the Muscles, this admirable contrivance is of little use."

THIS part of the animal œconomy proves to a demonstration, the necessity of exercise for the preservation of health.

"WHEN confined and unwholesome air is added to the want of exercise, diseases must be the consequence."

IT is owing to the combination of these two circumstances, that so many of the children of the poorer sort of the inhabitants of this city die annually.

THE exercise of walking is preferable to any other mode, for those who are not greatly debilitated or infirm ; because a greater number of Muscles are thereby put in action than by any other.

THOSE



THOSE who are confined to sedentary employments, should therefore devote a certain portion of their time, to taking a walk every day a few squares in the open air, and employ one afternoon of every week in some active diversion.

A NUMBER of tradesmen are often crowded together in the same small apartment; this is particularly the case with Weavers, Taylors, Shoemakers, &c. In this situation they generally continue for many hours at a time, often with the addition of several candles burning, whereby the air becomes charged with the Phlogiston issuing from them, as well as from the Lungs, which renders it unfit for expanding the Lungs sufficiently, and of supplying the blood with the matter of heat. See Priestley's Philosophical Experiments; Crawford, on Heat; and Goodwin on Respiration.

MANY Artists are liable to diseases, in consequence of their particular occupations. Chemists, Brass-founders, workers in the  
various

various Minerals and Metals, Painters, Printers, &c. owing to the noxious effluvia (inseparable from those occupations) being received into the system, by the Lungs or Stomach.

“THE Scholar, the Philosopher, and the Statesman, who devote almost the whole of their time to study and reflexion, seldom fail to impair their constitutions, or of becoming Valetudinarians.”

“AND many young ladies, who regardless of exercise, customary meals, or necessary repose, are perpetually employed in reading Love-inspiring Novels, not only impair their constitutions, but pervert their imaginations, and corrupt their morals to such a degree, that they are ever after rendered unfit for the offices of domestic life, and unqualified to promote domestic felicity.”

“THE constant confinement of children within doors, and at School in crowds, proves destructive to the lives of multitudes, and  
never

never fails to render the constitutions of those whom it does not destroy, delicate and infirm."

"To be shut up several hours in the day in a School, as soon as a child can speak intelligibly; secluded from the benefit of exercise, and the refreshment of the open air, and compelled to learn what he cannot comprehend, is not only cruel, but inhuman." *See Dr. Gregory's Essays.*

AMONG the very poorest sort of people in the city, are sometimes engendered Fevers of the most contagious and malignant nature, as well as the most loathsome cutaneous diseases. These proceed from want of proper food and raiment, and from living in close, confined, and dirty apartments; in Garrets, Cellars, &c.—destitute of the common necessities of life, in a vitiated atmosphere.

"It is remarkable, that not only the human species, but Cattle also, which have been  
kept



kept upon too scanty an allowance of provision, or on that which is of a bad quality, are generally afflicted with diseases of the skin, which seldom fail to disappear when plentifully supplied with that which is wholesome, and more nourishing."

"THE diseases to which Labourers and Mechanics, who are employed in laborious occupations, are most subject, are, for the most part, very different from the foregoing: To these, the Erysipelas is very incident: This is occasioned by whatever gives a sudden check to the perspiration, after the heat of the body has been considerably augmented by exercise or any other cause; by the drinking of cold water, wet feet, keeping on wet cloaths, sitting or lying on the damp ground, or exposing the body to a current of air while in a state of increased perspiration."

PEOPLE who reside in the country, are often injured by handling a small tree, growing in moist swampy grounds, called by Linnæus *Rhus Vernix*, or poison Sumac, and  
by

by a small creeping Vine, resembling the Ivy, called *Rhus Radicans*, or Poison Vine. These like the juice of the West-India Cashu Nut, raise numerous minute Vesications over the surface of the skin, and cause considerable tumors of the parts affected. The vesications contain a thin transparent serum ; they frequently ulcerate and become purulent.—The cure consists in washing the parts, not ulcerated, with weak Lead-water, or common Cold-water, and in dressing the ulcerated parts with Goulard's or Turner's Cerate.

THIS class of people are very apt to be affected with Vomitting and Purging, Bilious Colic, &c.—From eating heavy four bread, vegetables of difficult digestion, and drinking weak stale small-beer, or the like.

“ SUCH as have to lift or carry heavy burdens, as Porters, Labourers, Carpenters, Shipwrights, &c. are very subject to *Hernias*, and to spitting of blood,” &c.

“ THIS last is owing to the vessels of the  
Lungs

Lungs being over distended, from their being obliged to draw in the air with much greater force, and also to keep their Lungs more distended than is necessary for common respiration.”

THE following is a copy of a letter from Dr. B. Rush, dated January 19th, 1791.

“ THE slow Nervous Fever, as described by Dr. Huxham, was a very common disease in Philadelphia, during my apprenticeship, (from the year 1760 to 1766) also for many years after, I settled in the city, which was in the year 1769.

“ THE late Dr. Thomas Cadwallader, who died in the year 1779, in the 71st year of his age, informed me, that he remembered the time when that species of Fever made its first appearance among our citizens, and that it had gradually travelled here from Connecticut, where it was known by the name of the *Long Fever*. It was very common during  
I the



the late war, and appeared to be kept up by the intercourse of our city with the American Hospitals and British Prison Ships. During the last seven years it has gradually disappeared. In the course of the three last years, I have seen but few cases of it. It was very remarkable, that it never made its appearance in our city until the weather became cool. I have suspected from this circumstance, that it always had a portion of inflammatory, or what Dr. Cullen calls Synochoid Diathesis, mixed with it.

IN July, the exciting causes of Fever seem to produce Cholera Morbus ; in August and September, Remitting Fevers, with bilious discharges ; and in October and November, the slow Nervous Fever, of Dr. Huxham.

THE disappearance of this Fever is probably owing to the greater attention which has been paid latterly to cleanliness and fresh air, by all classes of people, both in sickness  
 Q and

health\*. The remote cause of this Fever, I have supposed to be *Contagion*, either from a diseased body, or from a morbid matter generated in the extremities of the arteries from low diet, the want of cleanliness, and above all from that languor which is induced upon the circulation, by grief, or any other sedative passion of the mind. I think too I have seen this Fever where it evidently arose from a neglected or ill-treated inflammatory Fever, in which neither of the above causes has operated. In this case it has occurred in the Winter and Spring. In the latter season, I have seen it succeed Pleurisy, and accompanied through all its duration by the same kind of troublesome Cough, which occurs in the last stage of that disease, when it arises from other causes."

MANY cases have come under the author's notice of persons of an infirm habit falling into the slow Nervous Fever, or Typhus Mitior,

\* THE labouring class of people are much better supplied with cloathing and wholesome food at present, than they were before the restoration and increase of trade.

tior, after having been debilitated more than common by fatigue and grief, without being exposed to contagion, but only in consequence of a sudden check of perspiration. Hence it appears that the same remote cause produces a different form of disease, according to the difference of constitution on which it operates.

THE combined debilitating effects of fatigue and grief are very common causes of this Fever, in persons of relaxed and infirm Constitutions, and it appears to depend intirely upon a diminution of nervous energy, but is most commonly the effect of infectious effluvia. *See* Dr. Hunter's opinion respecting the effects of vitiated air in producing Nervous Fever, in the London Medical Transactions.

THE Pulmonary Consumption appears to be the most frequent, as well as the most fatal of the Chronic Diseases which occur in Philadelphia. The greatest proportion of those who die of this malady, from the most accurate



curate observations which I have been able to make, belong to the society of the Friends; and of these, the number is nearly in the proportion of three females to one male.

PERHAPS the want of vivacity in the people of this society, and the sedentary lives of their females, are the principal causes of this difference; these certainly in some measure counter-balance the advantages which they enjoy from their superior cleanliness, neatness, and sobriety.

THE late judicious and experienced Dr. Fothergill, in my opinion, has given the best directions for the successful treatment of the Pulmonary Consumption of any author that has written on the subject. *See his Works in Quarto, published by J. Cokely Lettson, M. D.*

THE method of treating this complaint by the daily exhibition of Pukes, as recommended by Dr. Reid, is in general a very injudicious and pernicious one. The one  
recommended

recommended by the late Dr. Brown, is still more exceptionable.

THE improvements proposed by Dr. Rush, I have never had an opportunity of seeing put in practice ; but have had considerable experience of the good effects produced by observing the method recommended by Dr. Fothergill, particularly in the incipient stage of the disease. When the disease is contracted in a northern climate, the patient should always pass his Winters, if possible, in a climate within the tropics.

*Observations on the Weather and Diseases  
which occurred at Philadelphia, in the year,  
1790.*

Meteorological Table for JANUARY.

THERMOMETER.		BAROMETER.	WIND.	WEATHER.
Days.	7 o'clock, A. M.			
1st.	36°	29° 9'	S. W.	dry & clear.
10th.	21°	30° 1'	N. W.	clear, dry.
20th.	27°	30°	N. W.	do.
30th.	24°	30°	S. W.	clear.

THE

“ THE greatest height of the Mercury in the Thermometer this Month, was on the 4th, which was  $40^{\circ}$  ; and on the 6th, it was down to  $20^{\circ}$ , which was its lowest.”

“ THE Barometer was at  $30^{\circ} 5'$  on the 6th, which was its highest, and at  $29^{\circ} 6'$ , on the 9th, which was its lowest.”

### THE D I S E A S E S

MOST prevalent, were Catarrh and Rheumatism.

#### Meteorological Table for FEBRUARY.

THERMOMETER.		BAROMETER.	WIND.	WEATHER.
Days.	7 o'clock, A. M.			
1st.	$35^{\circ}$	$30^{\circ} 1'$	N. W.	cloudy.
10th.	$8^{\circ}$	$30^{\circ} 5'$	N. W.	clear.
20th.	$38^{\circ}$	$29^{\circ} 8'$	S. W.	cloudy.
28th.	$33^{\circ}$	$29^{\circ} 9'$	S. W.	clear.

“ THE weather this Month was very changeable ; alternately cloudy, clear, cold, and warm ; with some sharp frosts, and frequent rains, attended with high winds. The wind for the most part blew from the  
N. W.



N. W. S. W. and N. E. On the 10th, the Thermometer was at  $8^{\circ}$ , and on the 24th at  $40^{\circ}$ , which were its highest and lowest stations this month."

## D I S E A S E S

MOST prevalent, were the same as in January. The pleurisy, and other inflammatory complaints, were also met with in different parts of the city.

### Meteorological Table for MARCH.

THERMOMETER.		BAROMETER.		WIND.		WEATHER.
Days.	7 A. M. & 3 P. M.					
1st.	$30^{\circ}$	$40^{\circ}$	$30^{\circ} 3'$	$30^{\circ} 2'$	N. E.	snow & rain.
10th.	$18^{\circ}$	$28^{\circ}$	$30^{\circ} 5'$	$30^{\circ} 5'$	W.	clear & cold.
20th.	$33^{\circ}$	$49^{\circ}$	$30^{\circ} 6'$	$30^{\circ} 4'$	S. E. S.	clear.
30th.	$48^{\circ}$	$46^{\circ}$	$30^{\circ} 3'$	$30^{\circ} 2'$	N. E. W.	clear.

"A GREATER proportion of clear and moderate weather occurred this month than usual at this season of the year. But on the 4th, the Mercury was as low as  $4^{\circ}$ , which was lower than it had been any time before this Winter. On the 7th, there was a storm of hail and rain, the wind at N. W. and very high.

high. The only considerable snow this season, fell on the 10th of this month, but only remained on the ground three days."

## D I S E A S E S.

VARIOUS kinds of inflammatory diseases, and also the Measles and Hooping Cough, occurred very frequently this month. Several people addicted to the pleasures of the table, and accustomed to a sedentary inactive manner of living were affected with the Gout. But the Rheumatism was more common than any other complaint, especially towards the latter end of the month.

### Meteorological Table for APRIL.

THERMOMETER.		BAROMETER.		WIND.	WEATHER.
Days.	7 A. M.	3 P. M.	idem.	idem.	
1st.	34° 2'	59°	20° 5'	30° 3'	S. W. clear, windy.
10th.	50°	68°	29° 7'	29° 5'	N. E. thund. rain.
20th.	43°	56°	29° 11'	29° 8'	E. hard rain.
30th.	46°	61°	30° 11'	30°	N. W. cloudy, windy.

## R E S U L T.

Thermom. { 7th greatest degree of cold, 33.  
 { 4th greatest degree of heat, 78.

“ THE

“ THE weather in general this month was clear, cool and pleasant.” The diseases the same as those in March.

### Meteorological Table for MAY.

THERMOMETER.		BAROMETER.		WIND.		WEATHER.
Days.	7 A.M.	3 P.M.				
1st.	45° 5'	65° 7'	30° 3'	30° 2'	S. W.	clear, cloudy.
10th.	50°	82° 6'	30° 4'	30° 2'	S. W.	idem.
20th.	53° 4'	66° 9'	29° 10'	29° 6'	S. E. S.	rainy, cloudy.
30th.	56° 7'	63° 5'			E.	rainy, &c.

### R E S U L T.

Thermom. { 8th greatest degree of cold, 41°,  
              { 11th greatest deg. of heat, 90° 5'.

THE greatest degree of cold in May, 1791, was on the 14th, when it was 45° 9'. The greatest degree of heat was on the 30th, 91° 6'.

Barom. { 8th greatest elevation, 30° 6'.  
          { 21st least elevation, 29° 6'.

PREVAILING winds were from N. W. and S. W.

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“ THIS



( 130 )

“ THIS month was very dry, clear, calm and pleasant.”

## THE DISEASES

OF this month were very few. The Small Pox, by Inoculation, was very general and successful.

## Meteorological Table for JUNE.

THERMOMETER.		BAROMETER.	WIND.	WEATHER.
Days.	7 A. M.	3 P. M.		
1st.	65°	81°	30°	W. clear.
10th.	59°	63°	29° 8'	N. E. rainy.
20th.	54°	81°		W. N. W. clear, windy.
30th.	66°	79°		W. cloudy.

## R E S U L T.

Thermom. { 3d greatest degree of cold, 54°,  
 { 17th greatest degree of heat, 92°.

WIND S. W. and W.

J U N E, 1791.

Thermom. { 21st greatest degree of cold, 58°,  
 { 9th greatest degree of heat, 94°.

VERY

VERY few diseases prevailed this month; but in the same month of the year 1791, inflammatory diseases were very frequent; especially Rheumatism, Cynanche Tonsillaris, or inflammatory Quinsy, and Pleurisy; several were affected with Cholera and Diarrhea, in consequence of a sudden change from hot to cold weather, which took place the latter end of this month; the wind having shifted suddenly from the South to the N. W. after a thunder gust.

SUCH are the various and even opposite effects produced by the same exciting cause when it operates upon different constitutions, or according to the nature of the Diathesis present in the system.

### Meteorological Table for JULY.

THERMOMETER. BAROMETER. WIND. WEATHER.

Days.	7 A.M.	3 P.M.		
1st.	63° 5'	78° 8'	29° 11'	W. cloudy.
10th.	61° 2'	79° 2'	30° 8'	W.S.W. idem.
20th.	65° 8'	79° 9'	29° 10'	N.W. idem.
30th.	63° 5'	86°	30° 10'	S.W. fair, cloudy.

RESULT.

## R E S U L T.

Thermom.  $\left\{ \begin{array}{l} 24\text{th greatest deg. of heat, } 90^{\circ} 5' \\ 12\text{th greatest deg. of cold, } 54^{\circ} 5' \end{array} \right.$

WIND W. and S. W.

ON the 23d, 24th and 25th of July, 1791, the Thermometer was from  $93^{\circ}$  to  $95^{\circ}$ , at two o'clock, P. M.

“SCARCE any rain fell this month, except a few slight showers; there was very little thunder and lightning, which was considered as very extraordinary.”

“WHEN the Barometer is low, it always indicates storms or falling weather.”

## D I S E A S E S.

DIARRHÆAS and Choleræ were epidemic the latter end of this month, especially among children. This is the case about the same time every year, according as the extreme heats set in sooner or later.

THE Cholera generally came on in the  
night



night time, or after a change from very hot to considerably cooler weather, whereby a sudden check was given to the perspiration, and the nervous system amazingly debilitated.

A FEW drops of Laudanum, in a Peppermint or Cinnamon Julep, frequently repeated ; spirituous fomentations to the abdomen, applied very warm, and the application of heated Flannels to the extremities, scarce ever failed of curing the Cholera ; having first favored the evacuation of the bilious matter from the stomach, by frequent draughts of Camomile Tea, or Coffee made of toasted Oatmeal.

THE Diarrhæa (if indubitable signs of laxity and debility are present) can only be cured by tonics, spirituous drinks, warm cloathing, cleanliness, pure air, and moderate exercise, with the occasional use of Laudanum, in very small but frequent doses, and a regimen of very easy digestion, and of an Alkaline quality.

A STRONG

A STRONG decoction of Peruvian Bark, with the addition of a little powder of Galls and Cinnamon, given in small draughts repeatedly in the day time, and a small dose of Paregoric Elixir at night, has succeeded in numerous cases after stronger astringents, Aromatics and Absorbents, had failed.

A decoction of Rice, Cinnamon, and a little Chalk makes a very suitable drink.

WHEN a child has a Fever or a Diarrhæa, the complaint is generally ascribed to worms, even by those who ought to know better. The sufferer is therefore compelled to take something to destroy Worms, when nine times in ten none exist ; or if they do, they are by no means the cause of Fever, at least they are never the direct or exciting cause. It is true they may irritate persons of exquisitely sensible and weak Nerves, sufficiently to induce a Spasm of the bowels and occasion Diarrhæa, Colic, and even convulsions ; but it is impossible for them to produce a genuine Fever.

SEVERAL

SEVERAL cases of Rheumatism, and a few of Pleurisy, occurred even this month.

### Meteorological Table for AUGUST.

THERMOMETER. BAROMETER. WIND. WEATHER.

Days.	7 A.M.	2 P.M.			
1st.	65° 7'	77° 4'	29° 11'	N.E.	cloudy.
10th.	71° 4'	84° 4'	29° 10'	W.	cloudy, clear.
20th.	61° 2'	75° 9'	30° 2'	N.N.E.	fair.
30th.	68°	83° 7'	29° 11'	N.E.	fair, cloudy.

### R E S U L T.

Thermom. { 14th\* greatest deg. of heat, 92° 7'.  
 { 24th greatest deg. of cold, 58° 5'.

WIND S. W. and N. E.

THE weather, during the greatest part of this month, was very warm ; and when the wind blew directly from the South, it was almost insufferably oppressive ; but when ever it came from a N. W. direction, it was very refreshing and pleasant.

### D I S E A S E S.

\* AUGUST 15th, 1791. The Thermometer was at 82° at 2 o'clock, P. M. On the 30th, it was 94 ; but fell the day following to 76. The wind shifting from South to N. W. after a heavy gulf of rain.



## D I S E A S E S.

THE acute diseases which occurred this month, were nearly similar to those of the preceding one. In addition to these, the Dyfentery became very frequent towards the latter end of the month, at which time the dews were very heavy and chilling.

THE following method of treating the Dyfentery, scarce ever failed of success.

AFTER the patient's stomach was cleared out by a mild Puke, and his bowels by a full dose of Glauber's Salts; he took a paper of the following powder, in a draught of agreeable beverage, every three hours, or if much griped and troubled constantly with Tenesmus, every two hours.

*R/.* Pulv. Sal. Glaub, ℥j.

Tart. Emetic, gr. j. m.

f. ch. no. vj. vel viij.

THIS was continued every day in the same manner, as long as the griping or tor-

mina of the bowels and scanty mucous stools continued, and afterwards occasionally if the morbid symptoms returned.

WHERE this medicine caused griping, the Tart. Emet. was omitted, and the powder given without it.

WHEN it became very disagreeable to the patient, Castor Oil, or Cream Tart. with a small quantity of Tart. Emet. was substituted.

FROM one to two grains of Opium, or a proportionable quantity of Laudanum, was also given to an adult every night, from the time of taking the first purge till cured.

WHEN the patient's strength was not greatly impaired, he was confined to mild cooling drinks, acidulated with Lemon Juice, or syrup of Tamarinds; and his diet was Spoon Meats without Wine or Spices, and all the ripe and juicy Fruits of the season. Sweet Milk and Butter Milk were also allowed

S ed

ed ; but when the strength was considerably impaired, Wine-Whey, and Sangree were allowed for common drink, and Panada or Tapioca, with Wine and Nutmeg, for food, &c.

WHEN the griping was very distressing, and the rectum appeared excoriated, Glisters of Barley Water and Gum Arabic were occasionally injected, to which were frequently added a few drops of Laudanum. The Abdomen was also sometimes fomented with Flannels, wrung out of a bitter decoction, as hot as could be borne, and afterwards rubbed with warm Laudanum, and spirits of Camphor, or Camphorated Oil and Laudanum.

As soon as the griping was removed, a decoction of Cortex Peruv. with eight or ten drops of Elixir Vitrioli, was administered four or five times a day, a more liberal use of Wine directed, and an Anodyne continued at night. To prevent a relapse, exercise, and



a Flannel Vest, &c. with other warm cloathing, were recommended.

THIS, and this alone, is the only certain and successful method of treating the Dysentery, when it is an Idiopathic disease. I never saw a case where Blisters were of any real service, except when the disease was only symptomatic, or combined with the Intermitting or Remitting Fever, which is seldom or never the case in Philadelphia.

THE method of treating this disease by diffusible stimulants and a cordial diet, recommended by the late Dr. Brown, and by the sweating process, recommended by Dr. Mosely, in his Treatise on Tropical Diseases, I have seen prove injurious in several instances, and believe they can seldom or ever succeed.

Two cases of Peripneumony came under my observation this month. The one was a man 56 years of age ; he was attacked with the disease, a short time after leaving off a  
Flannel

Flannel Shirt, which he had worn all the preceding season. The other was a delicate woman, the mother of several children, who appeared much disposed to Phthisis Pulmonalis. The disease was occasioned with her, by sitting a considerable time in a cool Spring-House, when much heated and fatigued.

THE man died, owing, I believe, to the delay of his friends in making application for his relief. His Thorax was opened, and an abscess discovered in the right Lobe of the Lungs, and marks of Gangrene in the Pleura, in consequence of the high inflammation with which it had been affected early in the disease.

THE woman was bled four times, by which she lost 36 ounces of blood—was put upon the Antiphlogistic Regimen, purged moderately for two or three days with Salts and Tartar Emetic ; and after the second bleeding, had a large Blister Plaster applied over the affected part.

IN

IN every case of Pleurify, the patient should be blooded every day, more or less, according to the violence of the Pain, Fever and strength of the Pulse, and where those symptoms are very violent, twice a-day (without regard to the state of the expectoration), as well as freely purged, till the Fever, Pain and fulness of the Pulse be all considerably reduced. The patient should at the same time strictly observe the Anti-phlogistic Regimen—Have his chamber constantly refreshed with cooler air than would be agreeable in time of health, if the season will admit, and not be oppressed with bed-cloaths—His bed and body linen daily shifted—All his drinks should be taken about the temperature of Spring Water, or at most not warmer than a Toast will make it.

BLISTERING is always found most serviceable after copious bleeding.

When the Pulse is reduced, the Pain and Dyspnea abated, and the Fever moderate, one of the following Powders, taken in  
Barley



Barley Water or Flaxseed Tea, acidulated with Lime Juice, and repeated every two or three hours, generally finishes the cure.

*Rf.* Pulv. Sal. Nitri vel Crem. Tart,  $\text{z} \text{ij}$ .

Tart. Emetic, gr. j. m.

f. Chart. no. vj.

IN cases where the Pulse sinks, and considerable prostration of strength comes on, instead of the above Powders and the cooling drinks, a few grains of Volatile Alkali and Wine-Whey, or heating Aromatic Teas should be substituted ; and Blisters applied to different parts of the body.

### Meteorological Table for SEPTEMBER.

THERMOMETER.		BAROMETER.	WIND.	WEATHER.
Days.	7 A. M.	2 P. M.		
1st.	63° 5'	75° 9'	30° 2'	S. S. E. S. W. cloudy.
10th.	65° 7'	82° 7'	30°	S. W. foggy, fair.
20th.	54° 5'	71° 4'	30° 2'	N. N. E. fair, cloudy.
30th.	61° 9'	68°	29° 11'	N. E. W. rainy, cloudy.

### R E S U L T.

Thermom. { 11th greatest deg. of heat, 88° 2'.  
 { 24th least deg. of do. 45° 5'.

WIND S. W. and N. W.

“ THIS

“THIS month was dry and cool ; the mornings generally foggy. The dews which fell in the evenings and during the night, were very copious, and in a great measure made up for the deficiency of rain.”

THE frequent changes in the temperature of the air, particularly from extreme heat to extraordinary cold, gave rise to a great variety of diseases of a very different nature ; but the usual epidemic of the season, the Bilious Remitting Fever, as it is called, was by far the most common.

I SHALL here take the opportunity of giving a description of the symptoms of this disease, and of making public the remedies and method of treatment which I have found most certain and successful.

THE Bilious Remitting Fever, which is more or less epidemic at Philadelphia every year in Autumn, begins with a sense of general debility ; weariness, and pain in the back and loins ; giddiness of the head, loss  
of

of appetite ; inclination to Puke ; chilliness, succeeded by flushes of heat ; distention of Stomach ; some perceptible uneasiness in respiration ; quick small irregular Pulse.

THESE symptoms generally continue three or four days, and sometimes longer, before the patient is confined to bed. After that, the Feverish symptoms become considerable in the afternoon, but always remit more or less before morning. With the remission, the skin, which during the Paroxysm was dry and hot, becomes moist and cooler ; but still some quickness and irregularity continue in the Pulse, some Thirst, and other slight symptoms of Fever.

THE Paroxysm returns commonly about noon or soon after, without any chill or shaking, but is often preceded with a disagreeable and distressing sense of cold and anxiety about the Precordia, which gradually subside when the Paroxysm is completely formed. While the Paroxysm is forming, a distressing and violent puking often comes  
on,



on, and sometimes a very weakening Diarrhæa. The matter evacuated is commonly mixed with bile, and is sometimes very green and corrosive.

THE Tongue is covered from the beginning with a whitish mucus, which in the course of the disease, if the symptoms of general debility continue to increase, and the remissions become more indistinct, as is often the case, becomes dry and hard, and of a dark brown colour--a dark coloured fordes also gathers about the teeth and gums.

IN this manner the Fever generally continues, with an increase of the symptoms in the afternoon and great part of the night, with a remission or abatement of the same in the morning, till in a longer or shorter period, it ends either in complete and distinct intermissions, or degenerates into a continued form.

WHEN it degenerates into the continued form, it resembles the Typhus or Putrid Fe-

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ver

ver in all its symptoms, but differs from it essentially in not being contagious.

MANY Physicians from having observed the extraordinary quantity of bile discharged by patients with this Fever, have been led into a notion that a depraved state of this fluid is the cause of the Fever—But by whatever means vomiting is excited, if often repeated with violent strainings, it has a powerful effect in emulging and emptying the biliary ducts, and commonly forces out a great deal of bile. This will necessarily be the case in Remitting and Intermitting Fevers ; for in consequence of the debility induced by the remote causes (which are supposed to be Marsh Miasmata, and a long continued course of great heat), especially during the cold or forming stage of these Fevers, the blood is thrown in greater quantity and velocity into the vessels of the internal Viscera, because it there meets with less resistance than at the surface of the body, and among the rest into the Vena Portæ, in consequence of which a greater quantity than  
ordinary

ordinary of bile is secreted and effused into the Veflica Fellis, and Duodenum, &c.

## REMOTE CAUSES.

FROM the Situation and Season in which this Fever prevails ; from the manner in which it begins ; from the subjects most liable to it ; from its terminating so generally in an Intermittent, &c. I am convinced that it is produced by the very same occasional or exciting cause as the Intermittent Fever, and that this exciting cause is Marsh Miasmata. The principal difference between Intermittents and Remittents, appears to consist in the Constitution or Diathesis present, upon which the occasional cause operates ; in other words, the difference in the symptoms of the Intermittent and the Remitting Fever, is owing to the difference of Diathesis, tone, and vigour of the Solids, particularly of the Muscular Fibres of the system. This is analogous to what happens in other circumstances—Exposure to cold in Winter, when the constitution is most firm



firm and vigorous, occasions Rheumatism or Pleurisy—In Summer, exposure to cold produces Catarrh or Diarrhæa.

THE circumstances preceding and accompanying Cholera, furnish sufficient proof that it does not depend upon the same causes as Fever.

THE subjects of this Fever have for the most part been greatly relaxed by the long protracted heat of the preceding Summer. Every thing else that debilitates the Nervous System, may be considered as a predisposing cause.

THE observations of Physicians well qualified for the enquiry, made in different regions of the earth, have proved beyond controversy, that exhalations issuing from moist and marshy grounds, which are now called Miasmata, are the principal cause in the production of Intermittents and Remittents.

THESE

THESE appear to operate, by inducing a debility in the nervous system, diminishing the energy of the brain, and all the functions of the body depending thereon.

## PROXIMATE CAUSE.

THIS appears to be a state of debility more predominant in the Nervous, than the Vascular system.

THAT such a distinction really exists, is evident from the debility which prevails in all the functions during the forming stage, even of inflammatory diseases.

THE Spasm assigned by Dr. Cullen, is now generally known to want support—Dr. Brown, by making no distinction between the separate conditions and powers of the human body, and by confounding sensibility with irritability, has been guilty of a much grosser error, and one which has had pernicious effects in practice.

*Of*

*Of the Cure of the* REMITTING FEVER.

THE indications of cure in this Fever, as well as in every other whose predominant symptoms flow from a state of Muscular debility, consist simply in restoring power and energy to the Nervous system.

THIS we are taught by that surest guide, experience, is best accomplished by the application of certain stimulating and tonic powers, adjusted as near as possible to the state of debility present: for we know of no antidote to these Miasmata, which are so poisonous to the source of life.

IF the spontaneous vomiting has not evacuated the stomach sufficiently, from 10 to 30 grains of Ipecacuana, or a small dose of Tart. Emetic, should be given in the evening, its operation promoted by warm water or Camomile Tea, and an Anodyne given



given after its operation, the feet having been previously bathed in warm water.

If called early in the complaint, Blisters should also be applied to the Wrists as soon as the Anodyne is taken--By these means an intermission is very frequently produced ; when the exhibition of the Bark in Wine, next day, commonly prevents a return of Fever.

FROM 20 to 30 drops of Laudanum, or from one to two grains of solid Opium, is the proper quantity to be given at a dose.

WEAK warm Punch, Wine-whey, or Sangree, will be proper after the Anodyne ; and, if the Feverish Symptoms are not high, will be proper through the whole course of the Disease. Snake-root Tea, has also been found a very useful drink, particularly during the Paroxysm--In the remission, it answers best when joined with a Decoction of the Bark, with the addition of more  
or

or less Wine, according as the debility manifest in the several functions may indicate.

If the Emetic does not also operate by stool, or if symptoms of debility render the exhibition hazardous, a free evacuation should be procured, by giving the fourth part of an ounce of Glauber's Salts, dissolved in beverage or Tamarind-water, every three hours, till it has had the desired effect.

As soon as this is accomplished, immediate recourse should be had to the Peruvian Bark, which should be given without reserve, and in as large quantities as the Stomach will bear, without regard to the presence or absence of Fever--except that, during the Paroxysm or Exacerbation, it ought to be given without Wine, provided the Fever does not appear to be assuming a continued form, or is not strongly marked with general debility.

DURING the remission therefore, let Wine  
I be

be joined with it, and given liberally ; but during the Paroxifm, let it be given, if in fubftance, with Snake-root Tea, or any mild Aromatic infufion : if it can not be taken in fubftance, let two ounces of it, with half an ounce of Serpentar. Virgin. be boiled in two pints of water, to one pint. A wine-glafs full of the ftrained liquor, more or lefs, according to circumftances, with an equal quantity of foud old Port, or half as much Madeira Wine, to be given every hour during the remiffion, and the fame quantity every two hours during the Paroxifm without the Wine, or with a confiderably lefs quantity.

IF it occasions either Puking or Diarrhæa, two or three drops of Laudanum, and a little Cinnamon, or fpirituos Peppermint Water, fhould be added to every fecond or third dofe.

WHEN Griping and Sicknefs are very frequent and diftreffing, they indicate an accumulation of bilious or mucous matter in the Primæ Viæ, and have often been relieved by



a common Glister, or the exhibition of a mild laxative. Rhubarb and Cream of Tartar answers very well, or a small pill of Calomel or Aloes, taken at bed-time, or early in the morning, without interrupting the exhibition of the Cortex, Vinous Drinks, and Cordial Regimen.

BUT a Diarrhæa should always be attended to, and diminished, otherwise the Patient's strength will be inevitably reduced by it.

IF, as some times happens, an incessant vomiting should come on, heated substances should be applied to the extremities and surface of the body ; hot spirituous drinks given almost continually, with a few drops of Laudanum and Lavender Compound ; and Blisters applied to the Wrists and Stomach, and Sinapisms or Rubefacients to the Feet.

IF the Stomach rejects the Laudanum as soon as swallowed, it should be administered

ed in a Glister of Camomile Tea or Barley water.

DR. BLANE informs us, that he has put a stop to the incessant Puking which accompanies the yellow Fever of the West Indies, by the application of Blisters when Opium failed.

TEN grains of Sal. Tart. mixed with 30 grs. of Cream of Tartar, with a few drops of Laudanum, and a little Essence of Peppermint or Cinnamon, taken in a draught of warm water in the act of effervescence, has often put a stop to severe vomiting; but unless it be swallowed while in an effervescing state, it has no effect. Its good effect therefore seems to depend upon the fixed air extricated by this process.

THERE is a greater probability of putting a speedy termination to this Fever, when the Remission is very distinct, though the Paroxysm may be very violent, than when the Remissions are more obscure, and  
the

the Feverish Symptoms, during the Paroxysm, are less violent; because the less distinct and perfect the Remission, the greater is the debility present in the whole system, in the Vascular, as well as in the Nervous.

DR. CULLEN has ascertained in a very satisfactory manner, that the hot stage of Fevers, almost always corresponds with the preceding cold stage; and that when a Fever commences with a sudden and violent cold stage, and is soon after succeeded by a hot stage, it is a certain proof that the System, and especially the Heart and Arteries are but little, if any, impaired in respect to vigour and activity. He has also ascertained, that when the Paroxysm of any Fever is preceded by little, or no cold stage, and the more it resembles the continued form, the greater the debility.

THE cause of the Remitting Fever, certainly



tainly operates more powerfully on the Nervous System than on the Vascular, otherwise the great activity which is often observable in the Pulse, during the hot stage, could not take place.

THE advantage of cleanliness and pure air in Fevers, is now too generally acknowledged to require insisting on here.

WHEN the debility is very great, and the circulation very languid, the patient's limbs should be wrapped up in heated woollen cloths, occasionally repeated.

BUT when the skin feels preternaturally hot, and the patient much exhausted, washing his body with cold Spirits of Wine or Brandy, always affords grateful refreshment, and renders it cooler.

WHEN this Fever degenerates into a continued form, with great prostration of strength, foul and parched Tongue, and

a collection of filthy, dark-coloured mucus about the Teeth and Gums, and resembles the Typhus, or Putrid and Contagious Fever (which arises from a vitiated state of human effluvia,) in all its symptoms—The same plan of treatment should still be pursued ; with only this difference, that the Bark and Wine must now be given in larger quantity, and continued day and night.

A BOLUS containing five or six grains of Volatile Salts, may also be given every two or three hours, and Rubefacients may be frequently applied to the limbs ; but Blisters seldom produce any good effect in the low state of either this Fever or the Typhus.

DURING the Convalescent State, the patient should guard against exposure to cold damp air, and should make use of Huxham's Tincture of the Bark, several times a-day, either mixed with Wine or Water,  
till

till his digestive powers are perfectly restored.

THE forming stage of most diseases resemble each other so much in the greatest number of Symptoms, that it is difficult to distinguish one from another at their commencement.

I RECOLLECT a case of Hepatitis that occurred this month, which began with symptoms resembling those of the Remitting Fever.

THE Disease commenced with a distressing sensation of cold, accompanied with frequent puking and great prostration of strength; these were in a few hours succeeded by high Fever and pain in the region of the Liver. After opening a Vein, all the symptoms of debility accompanied with puking again returned.

DETERRED by this circumstance, and  
the



by the frequent return of puking from repeating the Venæsection, the pain increased, and in a few days terminated in an Abscess. This at length discharged itself gradually by the Intestines ; and though the patient was reduced to the lowest extremity of life, he afterwards recovered, and at present enjoys a good state of health. The quantity of Laudanum which this patient took after the Abscess began to discharge, in order to restrain puking, and the quantity of strong Brandy Toddy which he took to preserve his strength would be scarcely credited if I was to specify it.

DR. WISTER, who was consulted on the case, can bear witness that he took ten drops of the best Thebaic Tincture four times a-day, and from 60 to 80 drops in the course of the night, for six weeks ; great part of which time we expected, at our morning visits, to find him

2

dead,

dead, to such a low ebb and distressing situation was he reduced : But, contrary to our expectations, his appetite gradually returned; the evacuation was no more perceived; his Hætic ceased; and health returned, after five months confinement to bed.

THE reason he was allowed distilled Spirits was, because his Stomach would not retain Wine : Even distilled Spirits was rejected, except when taken in water almost scalding hot.

IN the Autumn of 1781 and 1782, I believe, to speak within bounds, more than one-half of the children, between the age of six and eighteen months, in Southwark, died of the Cholera Morbus, Diarrhœa, and Remitting Fever.

OF late years, the mortality has not been so great, owing, I presume, to their being  
X better

better supplied with cloathing and wholesome food, and to the greater regard which has been by all ranks paid to Cleanliness, in consequence of the greater prosperity which they have experienced, since the restoration and increase of Trade; and, in a great measure, to the Physicians of the Dispensary, who have the charge of all the poorer classes, many hundreds of which would perish annually for want of adequate assistance, if it was not for that charitable and very useful Institution. Before that Institution was established, multitudes fell a sacrifice to the ignorance and villainy of Quacks and Nostrum-mongers.

THE arching of the Dock, and the cultivation of the Lots around the City, which were formerly waste Commons, and many of them covered with stagnant water, has also removed a considerable source of Disease from the City and its vicinity.

NOR



NOR is it unreasonable to suppose, that the improved state of Physic, has had some share in retarding the progress of Mortality.

IT is to the labours and sagacity of the immortal Cullen, that the world is indebted for the principal improvements which have been made in the treatment of Diseases.

FOR although he has dealt rather liberally in Hypothesis, all his practical Rules are supported by experience.

### Meteorological Table for OCTOBER.

THERMOMETER.		BAROMETER.		WIND.	WEATHER.
Days.	7 A.M.	2 P.M.			
1st.	53° 4'	68° 7'	30° 2'	N. W. W.	fair, cloudy.
10th.	42° 2'	43° 2'	29° 11'	N. N. E.	rain.
20th.	45° 9'	60° 3'	30° 2'	N. N. E.	cloudy.
30th.	54 1'	60° 1'	29° 1'		

RESULT.

## R E S U L T.

Thermom.  $\left\{ \begin{array}{l} \text{4th greatest deg. of heat, } 78^{\circ} 1', \\ \text{27th greatest deg. of cold, } 34^{\circ} 2'. \end{array} \right.$

WIND W. and S. W.

THE Weather was dry and cool the greatest part of this Month, as there were only eight days on which any Rain fell; and that was in small quantities, and at considerable intervals.

THE changes in the temperature of the air, were often very considerable and sudden.

FROST, which was first observed in the City and Suburbs on the 24th of September, became very severe, and rendered Fires constantly agreeable.

DISEASES this Month were similar to  
those

those in September, with the addition of Hepatic Affections.

THESE last generally required and were relieved by bleeding and purging with Calomel; when obstinate, a repetition of bleeding was often found necessary, and sometimes the application of a Blister.

GREAT numbers of children were inoculated this month, but in general the disease was not so favourable as it had been the preceding Spring, owing perhaps to the relaxed state of the Solids, in consequence of the preceding heat of the Summer—With some it became Confluent.

WHEN called to a patient previous to, or at the commencement of the eruption in the natural way, I always advised him to be kept out of bed in the day time, and to be covered very lightly in the night, exposing him to a greater degree of cold than would be safe in  
a state



a state of health, and insisted upon keeping his Bowels very free with Saline Laxatives, till the end of the sixth day from the first commencement of the symptoms; after which I directed a mild Anodyne every night with a Laxative occasionally, if Costive---By this method many were apparently preserved from having the disease in a severe manner.

IN cases of Convulsion, I permitted the feet to be bathed in warm-water, avoided exposure to cold, and gave Laudanum in Glisters when the patient could not swallow, till the Convulsions ceased, and the Fever began to rise; after which I gradually admitted exposure to cooler Air, allowed cool Drinks and mild Laxatives, and if the Fever became very violent, directed the patient to be carried abroad into the open air, &c.

WHEN the Symptoms of debility were great, the Puffles flat and pale, I always gave a little Calomel, joined with an Anodyne, at  
bed-

bed-time, and a strong decoction of the Bark and *Serpentaria*, with Wine, in the day-time.

IN most cases I found the Bark and Wine serviceable from the 11th to the 17th day.

FOR about the 11th day, even in the Distinct fort, if the Pustles are numerous, the swelling of the face begins to subside and the strength to decline.

WHEN the hands and feet were much swelled, I endeavoured to promote Urine by Diuretics, at the same time that I endeavoured to support the strength by Wine and Bark and a Cordial Regimen.

WITHOUT attention is paid to this circumstance, the feverish Symptoms generally become very violent and often fatal.

I have found Nitre dissolved in Beverage, when given in small Doses, answer very well—When a *Diarrhœa* supervened about this

this period, and manifestly weakened the Patient, I always endeavoured to check it, by giving three or four drops of Thebaic Tincture, frequently in a spirituous Julep—but not otherwise.

WHEN the Pock is dry, and formed into a crust, a Hectic Fever is often the consequence, owing to debility, and the obstruction of perspiration: Here small doses of Volatiles, with the Bark and Serpentaria, the Warm-Bath and Flannel Cloathings, by restoring strength and perspiration, generally effect a cure.

WHEN a Pregnant Woman takes the Small Pox in the natural way, Abortion is generally the consequence. The late Dr. Bond used to say, that this was always the case; but I have, however, seen instances to the contrary. But the frequency of its occurrence, ought to make us decline inoculating women in that condition. Does the mother's hav-  
ing



ing the Small-Pox when pregnant, prevent her child from receiving the infection after its birth ?

## Meteorological Table for NOVEMBER.

THERMOMETER.		BAROMETER.		WIND.	WEATHER.
Days.	8 A.M.	2 P.M.	8 A.M.	2 P.M.	
1st.	46°	58°	30° 2'	W. N. W.	foggy, rain.
10th.	37°	48°	30°	W. S. W.	fair c. rain.
20th.	41°	52°	30° 3'	N. W.	fair.
30th.	30°	40°		W. N. W.	fair.

## R E S U L T.

Thermom. { 2d\* greatest deg. of heat, 36° 5.  
 { 26th greatest deg. of cold, 27° 5.

WIND. W. N. W. N. W. W. & N. E.

“ MANY days in this month were very pleasant and agreeable ; but the greatest part of the Weather was cold, changeable and wet, with very variable winds—On the 26th,

Y . . . . . there

\* Alterations in the height of the Mercury in the Barometer do not precede, but always succeed, changes in the Weather.

there was a fall of snow for the first time this month."

## D I S E A S E S.

MOST of the Diseases which occurred this month, were of an Inflammatory nature, owing to the coldness and variableness of the Weather.

RHEUMATIC and Catarrhal affections were the most common; and the generality of those who had been subject to the Gout, were again visited by that foe to repose.

As Rheumatism is a very common and a very distressing complaint in this country, particularly in Philadelphia, I hope the following description, and method of treatment, founded on observation and experience, will not be unacceptable or useless.

THIS Disease is particularly distinguished  
by

by Pains affecting the larger Joints. It begins with the common Symptoms of Fever; and as soon as the Hot Stage is formed, is generally attended with a strong, full, and hard Pulse.

THE Pain seldom continues long in the same Joint; but shifts in a surprising manner from one to another—The Pain and Fever is always worst in the evening and night, owing in some measure to the heat of the bed and covering.

THIS Disease differs from the generality of Inflammatory Diseases in this, that it is not apt to terminate in Suppuration, but effusions sometimes are occasioned by it, of a transparent gelatinous Fluid, into the tendinous Sheaths.

WHILEVER the Disease depends upon an Inflammatory Diathesis, the pained joints are relieved by exposure to a colder temperature



ture than usual—When the Inflammatory Diathesis is removed or exhausted, the pain is always aggravated by cold, and relieved by heat. By due attention to these circumstances and the state of the Fever, we may always ascertain when the Disease is in an Acute, and when in a Chronic State.

THIS Disease is generally occasioned by exposure to cold and damp Air, after the body has been heated by fatiguing exercise, &c.

THE Proximate cause of this Disease, appears to be an Atony in the extreme Vessels, particularly of the Joints, while at the same time the rest of the System is in a state of increased tone and excitement.

I suppose, with Dr. Cullen, that the application of cold, especially when combined with moisture, is the most common occasional or exciting cause of Rheumatism; and that it produces its sedative and debilitating effects

effects, more particularly upon the vessels of the Joints, from their being more loosely and imperfectly covered by a cellular texture, than the intermediate parts of the Limbs.

THE indications of cure are, to restore a due balance and adjustment between the affected Vessels and the rest of the System.

## C U R E.

BLOOD should be drawn every day, in a larger or smaller quantity, proportioned to the strength and fulness of the Pulse, and acuteness of the Pain; and the Bowels kept very Laxative with Saline Purges, till the Pain and Fever are reduced.

WHEN the acuteness of the Pain renders Purging inconvenient, the following powder may be used with advantage.

R. Pulv. Nitri ʒiij. Tart. Emet.

Gr. i. m. f. ch. n<sup>o</sup>. vj.

ONE

ONE to be taken in Barley-Water, or Beverage, every two hours—or *Rf.* Sal. Tart.  $\text{ʒi}$ . Succ. Limon  $\text{ʒifs}$ .

m. cui, ad. Vin. Antim.  $\text{ʒij}$ .

aq. com.  $\text{ʒ4}$ . m. f. Jul.

Coch mag. secunda quaq. hor. sumend.

THE admission of cold Air, and the use of cool subacid liquors are found beneficial: But every thing heating or stimulating, aggravates the Pain and Fever—Even Opium, always aggravates the Disease, while any Inflammatory Symptoms continue.

IN the Chronic Rheumatism the plan of treatment must be reversed. Here ten grains of Gum Guaiacum, rubbed with a little Cream of Tartar and Loaf Sugar, and given in any agreeable vehicle, three or four times a-day, and a Sudorific Anodyne at night, generally affords relief. Warm flannel cloth, should be worn about the affected limbs; and  
when



when only weakness remains, they may be rubbed with the Oil of Amber or Tincture of Cantharides.

THE Cortex and Serpentaria, with the moderate use of Wine, and a Cordial Regimen, will all be proper to reinstate the Patient's health.

THE application of Blisters to the Joints, have often beneficial effects in the Acute Rheumatism ; but in chronic cases, I have seen better and more expeditious effects, when the pains were fixed, by rubbing Mercurial Ointment very liberally upon the affected parts, and giving the simple Mercurial Pill, agreeable to the advice of Dr. Clark, till the mouth began to be affected. The application of Vitriolic Æther to swelled Joints, especially when Oedematous, has also been found serviceable.

THE Cold Bath has also often been employed

ployed with advantage under the last mentioned circumstances.

It certainly is an invigorating remedy, when the powers of the system are not too much reduced to admit of re-action.

### Meteorological Table for DECEMBER.

THERMOMETER. BAROMETER. WIND. WEATHER.

Days.	8 A. M.	2 P. M.			
1st.	24° 6'	35° 2'	30° 5'	S. W.	clear.
10th.	26°	40° 1'	29° 11'	N. E.	cloudy, foggy, rain.
20th.	22°	38°	29° 6'	S. W.	cloudy.
30th.	12°	21°	30° 2'	N. W. N.	clear.

### R E S U L T.\*

Thermom. { 12, greatest deg. of heat, 43° 2'.  
 { 19, least deg. of heat, 6° 5'.

WIND S. W. N. E.

“ THE weather in general this month,  
 was

\* The Mercury in the Barometer fell with the S. and S. W. Winds, and rose with the N. and N. W.

was colder, more variable, and more disagreeable than it had been for several years."

HIGH and boisterous Winds prevailed the greatest part of the month.

ON the 8th, the River Delaware was firmly frozen over ; but was opened on the 12th, by a considerable fall of Rain—It closed again on the 18th, and continued so the remainder of the month.

THE weather was still more severe at New-York and Albany.

AT Albany, the Mercury is said to have been 10 degrees below 0 in the open Air, which was lower than it had been for four years before.

" AT Hartford in Connecticut, it was 7 degrees below 0 on the 19th."

Z DISEASES.



## D I S E A S E S.

ALMOST every kind of Inflammatory Complaint occurred in Philadelphia: But affections of the Lungs, whether in the slighter form of Catarrh, or more dangerous one of Peripneumony, were most prevalent.

SEVERAL cases of Cynanche Trachealis, or Hives, also occurred.

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*Of the CYNANCHE TRACHEALIS,  
or Suffocating CATARRH, vulgarly  
called the H I V E S.*

THE diagnostic Symptoms of this Disease are; a hoarseness, with some shrillness and ringing sound, both in speaking and coughing. At the same time, there is a sense of Pain about the Larynx; some difficulty of respiration, with a whizzing sound in inspiration, as if the passage of the  
Air

Air was straitened—The cough, without exception, in all that I have seen, was dry, harsh and sonorous—Together with these Symptoms, there is a frequency of Pulse, a Restlessness, and generally an increase of Heat—Neither redness nor tumour are perceptible within the Fauces, nor any alteration in the size of the Tonsils externally.

WITH the described Symptoms, and particularly with great difficulty of breathing, and a sense of strangling in the Fauces, the Patient some times suddenly expires.

THIS Disease attacks infants at the breast less frequently than after they are weaned. After this period, the younger they are the more they are liable to it: The frequency of it becomes less as children advance in age and vigour; and there are no cases recorded of children above twelve years of age being affected with it. It very frequently occurs in Philadelphia, both in Autumn and Spring, and even in Winter, among the infants of the  
 Germans

Germans who generally sit in rooms heated by close stoves.

IT often manifestly comes on from exposure to cold and damp Air, after having been previously heated or thrown into profuse perspiration.

PERHAPS the flaving of Saliva, by wetting and chilling the neck, may favour the operation of colder Air.

THE frequency of its commencing with the ordinary Symptoms of a Catarrh, favours this conjecture.

THERE have been many dissections made of infants who have died of this Disease ; and there has almost constantly appeared a preternatural Membrane lining the whole internal surface of the upper part of the Trachea, and extending in the same manner downwards into some of its Ramifications. This preternatural Membrane may be easily separated,



separated, and sometimes has been found separated in part from the subjacent proper Membrane of the Trachea. This last is commonly found without any appearance of Corrosion or Ulceration; but it frequently shews the vestiges of Inflammation, and is covered by a matter resembling Pus.

FROM the remote causes of this Disease; from the Catarrhal Symptoms commonly attending it; from the Fever constantly present with it; from the same kind of preternatural Membrane being found in the Trachea when the Cynanche Maligna is communicated to it; and from the vestiges of Inflammation on the Trachea discovered upon Dissection, we must conclude, that the Disease consists in an Inflammatory affection of the Mucous Membrane of the Larynx and Trachea, producing an Exudation analogous to that found on the surface of inflamed Viscera, the thinner parts of which evaporating, and being carried off by the Air in Respiration,

piration, leaves the remainder thick, dry, and solid.

THOUGH this Disease manifestly consists in an Inflammatory Affection, it does not commonly end either in Suppuration or Gangrene.

THE peculiar and troublesome circumstance of the Disease seems to consist in a Spasm of the Muscles of the Glottis, which by inducing a Suffocation, prevents the common consequences of Inflammation.

WHEN this Disease terminates in Health, it appears to be by a resolution of the Inflammation ; by a ceasing of the Spasm of the Glottis ; by an expectoration of the Matter exuding from the Trachea, and of the crusts formed there ; and frequently it ends only with an Expectoration, resembling that which attends a simple Catarrh.

WHEN

WHEN it ends fatally, it is by a Suffocation, in consequence of a Spasm affecting the Glottis; but sometimes probably owing to a quantity of Matter filling the Bronchiæ.

As the Disease has been incontrovertibly proved to be an Inflammatory Affection, the cure at present is generally attempted by the same means as have been found most successful in other Inflammatory Affections.

## BLEEDING,

BOTH general and topical, has often given immediate relief, when employed early in the Disease; and by being repeated to a second, and even to a third time, when the difficulty of breathing and heat of the Body were considerable, has entirely cured the Disease.

VOMITING immediately after bleeding has generally a very good effect—For this purpose



purpose I prefer a solution of Tartar Emetic, in Honey and Water, of tepid warmth, in the proportion of three grains to six tea-spoonfuls of the Honey and Water ; of which one tea-spoonful may be given every quarter of an hour, till it operates, and the operation promoted with Bran, Linfeed, Mallows, Balm or Hyfop Tea sweetened with Honey.

If the principal Symptoms are not manifestly mitigated after a second bleeding, the operation of an Emetic, and the exhibition of a Laxative Glister, (if the Emetic has not also proved purgative) a Blister Plaster, guarded with fine Gauze, should be applied without delay on each side of the Neck, so as to reach from the root of each Ear to the Trachea, and as soon as they have produced Vefications, they are to be removed, and the blistered parts dressed with Balsicum, or perhaps something more stimulating.

WHEN the Disease happens to children  
debilitated

debilitated by previous Disease, blood letting must be employed more sparingly, or perhaps omitted altogether; and our dependence must be placed on Emetics, Laxative Glifters, or purges of Calomel, and the application of Blifters; observing at the same time to keep the Patient's body cooler than would be agreeable if in health, and to enjoin the strict observance of the Antiphlogistic Regimen; which consists in avoiding every stimulating impresson; such as Heat, Exercise, Impatience, Animal Food, Spices, Salt, Butter, Sweet Meats, dried and hard Fruits, distilled or fermented Liquors, &c.

A Decoction of Barley and Raisins, or Oatmeal Gruel, with ripe juicy Fruits, either raw or baked, are the only articles of Diet allowable; and the Liquids already specified, or those of a similar quality, acidulated with Lime Juice, are the most suitable drinks.

DR. George Glentworth has done me  
A a the

the honour to inform me, that he lately cured two children of the Cynanche Trachealis, by putting them into the Warm Bath, when in danger of suffocating, immediately after one blood-letting, and the exhibition of a Puke, in the early Stage of the Disease—The whole of the Bodies of these Patients was immersed in the Bath, and when taken out, they were put to bed between blankets, and a copious perspiration promoted by warm Beverage or Balm Tea.

I HAVE often advised that a vessel of hot Water should be held under the Patient's chin, for the purpose of breathing the vapour issuing from it, but never perceived any beneficial effect from it.

PERHAPS when the Disease has been of several days continuance, it may assist in softening and loosening the preternatural Membrane; but I apprehend that the heat it occasions must be injurious in the early  
Stage



Stage of the Disease, while the Inflammatory Symptoms are considerable.

WHEN every other remedy fails, and the Patient is in immediate danger of suffocation, I think Bronchotomy might be tried with propriety. Perhaps life might be restored, even after suffocation, if the operation was immediately performed, and the Lungs inflated with bellows. If Bronchotomy succeeds, it will be necessary to keep a suitable Canula in the Orifice for the Patient to breath through till the Disease is removed.

IN order to insure the success of the Puke, it ought to be exhibited every fourth or sixth hour if the strength will permit.

I HAVE also seen good effects produced by the exhibition of Calomel in large and repeated Doses; but not so uniformly as from the Emetic Solution.

B I L L S

## BILLS OF MORTALITY.

*In Kalm's Travels, Page 57th, is Recorded the following Account of the Numbers which died Annually in Philadelphia, from the Year 1730 to 1750.*

<i>Viz. A. D.</i> 1730	222	<i>A. D.</i> 1744	410
1738	250	1745	420
1739	350	1748	627
1740	290	1749	758
1741	345	1750	716
1742	409		
1743	425		

From these Bills of Mortality, it appears that the Diseases which were then most fatal in Philadelphia were Consumptions, Fevers, Pleurifies, Hæmorrhagies, Dropsies, and Convulsions.

“THE number of inhabitants A. D. 1746, were computed to be about 10,000—In the year 1749, the number of houses in Philadelphia, was found to be 2076.”

A REGISTER

*A Register of the Births and Deaths of the various Religious Societies in the City of Philadelphia, from the first of September 1787, to the first of September 1788.*

<i>Names of the Societies, &amp;c.</i>	<i>BIRTHS.</i>		<i>DEATHS.</i>		<i>TOTAL.</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>	<i>Births</i>	<i>Deaths</i>
Swedish church	4	3	8	7	7	15
Roman Catholic church	145	123	51	39	268	90
Society of Free Quakers	16	12	7	5	28	12
Christ's & St. Peter's chs.	66	90	71	60	156	131
German Reformed ch.	91	90	37	42	181	79
Second Presbyterian ch.	22	22	16	18	45	34
Society of Friends	178	164	67	74	342	141
St. Paul's church	47	40	12	10	87	22
Third Presbyterian ch.	67	54	17	11	121	28
Moravian church	5	2	3	1	7	4
German Lutheran ch.	229	200	99	77	429	176
First Presbyterian church	56	38	25	15	94	40
Jews Synagogue	3	2	1	1	5	2
Scotch Presbyterian ch.	17	11	9	6	28	15
Baptist church	17	13	6	6	30	12
Potter's Field, Whites	125	93	85	39	218	124
Blacks	76	70	46	27	146	73
Total Number	1165	1027	560	438	2192	998

✂ The Strangers who have been interred in the Burying Grounds belonging to some of the abovementioned Societies, are included in the subjoined numbers.



*A Register of the Births and Deaths in the various religious Societies in the City of Philadelphia, from September first, 1788, to September first, 1789.*

<i>Names of the Societies, &amp;c.</i>	BIRTHS.		DEATH.		TOTAL.	
	<i>Males.</i>	<i>Females.</i>	<i>Males.</i>	<i>Females.</i>	<i>Births</i>	<i>Deaths</i>
German Lutheran church	216	197	82	77	413	159
German Reformed church	64	61	16	14	123	30
Christ's & St. Peter's chs.	81	89	75	79	170	154
St. Paul's church	31	37	14	24	68	38
Society of Friends	151	157	58	83	308	141
Roman Catholic church	114	120	37	28	234	65
First Presbyterian church	27	27	15	20	50	35
Second, ditto	29	26	23	24	55	47
Third, ditto	57	75	29	18	132	87
Scotch, ditto	6	8	8	5	14	13
Society of Free Quakers	11	13	6	5	24	11
Moravian church	3	1	3	4	4	7
Swedish church	7	6	5	4	13	9
Baptist church	15	14	6	7	29	13
Universal Baptist, ditto	1	2	1	0	3	1
Methodist church	23	22	9	11	45	20
Jews Synagogue	1	1	0	0	2	0
Potter's Field, Whites	91	96	89	53	187	142
Blacks	69	74	38	26	143	64
Total Number	993	1026	514	482	2019	996

*A Register of the Births and Deaths in the  
various Religious Societies in the City of  
Philadelphia, from September first, 1789, to  
September first, 1790.*

<i>Names of the Societies, &amp;c.</i>	BIRTHS		DEATHS.		TOTAL.	
	<i>Males.</i>	<i>Females.</i>	<i>Males.</i>	<i>Females.</i>	<i>Births.</i>	<i>Dths.</i>
German Lutheran church	219	196	107	96	415	203
German Reformed church	85	73	48	21	158	69
Christ's & St. Peter's chs.	79	87	67	69	166	136
St. Paul's church	30	36	16	20	66	36
Society of Friends	153	160	75	79	313	154
Roman Catholic church	127	122	29	38	249	67
First Presbyterian church	27	31	16	19	58	35
Second, ditto	29	38	26	21	67	47
Third, ditto	59	67	12	13	126	25
Scotch, ditto	18	13	3	2	31	5
Society of Free Quakers	9	12	4	3	21	7
Moravian church	3	4	0	1	7	1
Swedish church	7	8	6	3	15	9
Baptist church	14	16	6	8	30	14
Universal, Ditto	2	2	0	1	4	1
Methodist church	19	21	10	9	40	19
Jews Synagogue	1	2	2	1	3	3
Potter's Field, whites	94	85	87	49	176	136
Blacks	67	79	35	33	146	68
Total Number	1042	1052	549	486	2094	1035

FROM

FROM the three preceding Bills of Mortality, it appears that the number of Births in Philadelphia at present, annually, is only a little more than double the number of Deaths.

THE numerous Deaths which occur here, appear to be more owing to the sudden vicissitudes of Weather than to any other cause; for according to the observations of Professor Kalm, (page 104.) “ There is hardly a country on earth in which the Weather changes so often in a Day as it does here.”

IT frequently changes from excessive heat to piercing cold in less than twenty four hours—Sometimes it changes five or six times in the same day.

THE following calculations, the result of of observations for ten years on the London Bills of Mortality, by Mr. Simpson, with



with additional remarks by Dr. Foulke: extracted from his Oration on Longevity, delivered before the Philosophical Society at Philadelphia, are inserted to shew, that the probabilities or chances of enjoying health, and prolonging life, is much greater in the City of Philadelphia, and some other parts of the United States, than in any other districts of the World, containing a proportionable number of inhabitants.

By Mr. Sympfon's observations, it appears that not one-half of the Persons born in London live to be three years old ; not one-third to be 25 ; not one-fourth to be 38 ; not one-sixth part to be 49 ; not one-eighth to be 59 ; and not more than one in 500 of them to be 78.

IT appears from the observations of Dr. Price, that instances of Longevity are not always in proportion to the rareness of deaths in the early periods of life.

“ IN Pais de Vaud in Switzerland, he  
B b fays

says only one in 45 dies annually." In London nearly one in 20 and three-fourths dies annually; in Vienna, one in  $19\frac{1}{2}$ ; in Holy Crofs near Shrewsbury in England, one in 33.

IN Pais de Vaud one half of the inhabitants live to the age of 41. In a Country Parish in Brandenburg, where the annual Deaths are in the same proportion as in Pais de Vaud, one-half the Persons born do not reach their 26th year—In Holy Crofs one half reach their 27th year—In London and Berlin, such is the melancholy condition of the Inhabitants, that one-half of the children are buried before they are two years and three-fourths old.

“ THE ravage of Mortality is still more excessive at Vienna, where the second is the last year of life to half the Persons born in that City.

DR. PRICE proceeds to give us the proportion of those who reach 80 years of age in different places.

“ WE

“ WE shall here find apparent contradictions, if we are not prepared to expect instances of Longevity in the same places, which produce even the largest proportion of annual Deaths.

“ FOR instance—Holy Cross near Shrewsbury, furnishes a larger proportion of annual Deaths than Pais de Vaud or Brandenburg; but at the last place, one person in  $22\frac{1}{2}$  only reaches 80 years of age; and in Pais de Vaud, 1 only in 21 and a half; whilst in Holy Cross, one in 11 is found to reach this venerable period of existence.”

THE difficulty and consequent uncertainty of all political Arithmetic weakens our confidence in calculations of this nature; but if the most ingenious in Europe, who have every means of information in their power, are heard with diffidence, what confidence, can we expect to inspire whose sources of information are as yet so scanty and imperfect?



fect? “ We shall, however, venture to draw some inferences from such documents and data as we do possess.

THE expectation of life to an Infant just born is 18 years even in London, where early Deaths are more numerous, perhaps, than any where else except in Vienna.

ON Dr. Price’s principles, the number of annual Births, being multiplied into the expectation of life, should give the number of native Inhabitants ; for instance, it is said the Births in this City (Philadelphia) last year, were 2192, and this number multiplied by 18, the lowest expectation of life for an infant in Europe, amounts to 39456. But as it has since been found, that the number of inhabitants residing in the City and suburbs of Philadelphia is 42,400, the inference follows (upon a presumption, that the registry of Births is accurate) that the expectation for the life of every Infant is more than 18 to 1 here.

IN

IN all European Cities a calculation on these principles gives a result confessedly short of the real number of inhabitants, and the calculator is obliged to have recourse to the excess of Burials more than Births to account for the difference. But in this country, favourable as it is equally to Population and Longevity, we have even in its largest City an excess of Births more than of Burials, in the extraordinary proportion of 11 to 5, notwithstanding strangers who die in Philadelphia are included in the list of burials.

By comparing the number of annual Deaths in Philadelphia with the number of Inhabitants, we shall find that there is not more than one in 40 dies annually ; and if we do not include strangers in the account of the funerals, it will be found that there is not more than one in 50 that dies here.

“ FROM a paragraph in the News-paper, under the New-Haven Head, we find the  
annual

annual Deaths only in the proportion of 1 in 70 of the whole number of the Inhabitants; a proportion more flattering than any table we have met with, though the limited scale of this instance, and the corroborating circumstances cited, leave no room to doubt of its accuracy.

“ THE learned and ingenious Dr. Samuel Smith of Princetown, (Author of the Influence of Climate, &c. upon the human body) has favoured me with an account of a number of Families in the Jersey State, by which it appears that of the living four-fifths of them were above 10 years old; more than one-half upwards of 20; two-sevenths above 30; one-fifth above 40; one-ninth above 50; and one-fourteenth had passed, and some very considerably, the period of 60 years.”

“ MR. WM. BARTON's ingenious Letter, presented at the last meeting of the Society, contains



contains many curious particulars, and seems calculated to supply American data, the *Desideratum* of those tables with which other Countries have been furnished.

It appears from Mr. Barton's reference to Professor Wigglesworth, that one Person in eight of those buried in Ipswich Hamlet, in the State of Massachusetts, arrived to the very uncommon Age (in other Countries) of 80 years. "A proportion which must remain a monument of Longevity in all probability, only to be paralleled in the future History of our own Country."

D. PERCIVAL says, "in the Pais de Vaud, a district of the Province of Bern in Switzerland, and in a country Parish in Brandenburg 1 in 45 of the Inhabitants die annually; and at Stoke Damarell in Devonshire, 1 in 54; whereas in Edinburgh and Vienna, the yearly Mortality appears to be 1 in 20; in London 1 in 21; in Rome and Amsterdam, 1  
in

in 22 ; in Northampton, 1 in 26 ; and in Holy Cross, 1 in 33.

IN the Pais de Vaud, the proportion of Inhabitants, who attain the Age of 80, is 1 in  $21\frac{1}{2}$  ; Brandenburg, 1 in  $22\frac{1}{2}$  ; in Norwich, 1 in 27 ; in Manchester, 1 in 30 ; in London, 1 in 40 ; and in Edinburgh, 1 in 42. These facts afford a striking, but melancholy, proof of the unfavourable influence of large towns on the duration of life.

FROM the most accurate computation, London is found to contain 601,750 inhabitants ; and from 1759 to 1768, the burials have exceeded the christenings every year upwards of 7000 ; which is the recruit the Metropolis requires annually from the Country to support the present number of its People.

IN 1757, a survey was made of Manchester

ter and Salford. The number of Inhabitants then amounted to 19839; and the burials, exclusive of those among the Dissenters, were 778 per annum; but since that time the populousness of Manchester has considerably increased. Half of all that are born in that town die under five years of age.

THE Island of Madeira, which is situated between 32 and 33 degrees N. L. is so remarkably healthy, that two-thirds of all that are born in it, live to be married. Autumn is the most healthy; Summer the most sickly season there.

IN Manchester Diseases are most frequent and fatal in the Months of January, February, and March; and least so in July, August, and September.

“ AT Paris, and in Sweden, it has been observed, that Women not only live longer than Men; but that married Women live longer than single Women.”

C c

“ AND



“ AND in Switzerland it appears, particularly from the calculations of M. Muret, that of equal numbers of single and married Women between the age of 15 and 25, more of the former died than of the latter, in the proportion of two to one.”

IN the Parish of Holy Cross, Salop, an account was taken by the Vicar, A. D. 1760, of the number of Males and Females, of the Age of 70 and upwards; the latter amounted to 35, the former only to eight.—See *Price on reversionary payments*, and *Percival's Essays*, Vol. 2d.

FROM a comparison of the Bills of Mortality with the number of Inhabitants in the Parish of Manchester it appears, that whilst in the town the yearly Mortality is one to 28, in the Parish only one in 56 dies annually.

SUCH a striking disparity between the  
healthiness

healthiness of a large town and the Country which surrounds it, will scarcely be credited by those who have paid no attention to such enquiries.

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*An ACCOUNT of the SITUATION, CLIMATE and DISEASES of the STATE of DELAWARE.*

“ **T**HIS State, which is only 92 Miles in length and 24 in breadth, is situated between  $38^{\circ} 30m.$  and  $40^{\circ}$ . North Latitude ; and  $0^{\circ}$  and  $1^{\circ} 45m.$  Longitude, West from Philadelphia ; and bounded North by Pennsylvania ; East by the River and Bay of Delaware ; and West by Maryland.”

“ The East and South parts of this State are low and flat, and a considerable portion in

in an uncultivated condition, which occasions the Waters to stagnate; in consequence of which the Inhabitants are very subject to Intermittents and Remittents in the latter end of Summer and beginning of Autumn.”

IN the Northern parts of the State, the Land is more elevated and dry, the Soil fertile, and produces Wheat in large quantities, and all the grains and grasses common to Pennsylvania.

DOVER, the capital of the State, stands on a small creek, a few Miles from the River Delaware, and contains about 100 dwelling houses.

WILMINGTON, the largest Town in the State, is but 28 Miles from Philadelphia, situate upon a gentle ascent of an eminence along Christina Creek, about one and a half Miles from the River Delaware. This  
Town



Town, and the country to the North- West of it, is remarkably healthy.

THE difference observed in the vigour, activity, complexions, and aspect of the People who inhabit the low flat country and those of the high and dry parts, affords a very strong argument in favour of the opinion of naturalists; who assert, that the healthiness or unhealthiness of any situation and climate may be ascertained from an accurate observation of these circumstances, together with the knowledge of the diet, drinks, and occupations of the Inhabitants, with as much certainty as the nature and quality of any Soil may be determined from a knowledge of the species of timber and other vegetables which grow upon it spontaneously.

THE influence which particular situations, Climates, exposure to the Sun and Wind, Abstinence, or the occasional use of only scanty and indigestible Aliment, with an indolent

lent and slovenly manner of living, is almost incredible : So much so, that many Philosophers have been induced to think, that the sable blackness of the Negro, is owing to a combination of those causes. But Anatomy demonstrates that this depends upon a very different circumstance ; upon a peculiar and original organization and disposition of the rete mucosum, and is as much constitutional as the colour of the Eye.

DR. JAMES TILTON, a Physician of talents and experience, residing in the Town of Dover, in a Letter to Dr. Redman, President of the College of Physicians, dated April 1790, remarks that “ However there may be something essential and immutable in the nature of all Fevers, yet different constitutions of the Atmosphere may occasion, of necessity, a variety of practice even in Diseases of the same name.

HE further observes, that, “ Before the  
war,

war, during the winter, or inflammatory season of the year, they treated the Fevers which occurred at that place, by repeated bleeding, and the general antiphlogistic methods with remarkable success; but the same method now would be attended with very different effects; the exceptions at least are so few as hardly to deserve mentioning.”

“ OPIUM, Wine, Bark, Volatile Salts, are the Articles of Materia Medica, we are obliged chiefly to have recourse to.”

“ So contrary to the Phlogistic, and so favourable to the Typhous Diathesis is the present constitution of the Atmosphere, that blood-letting is very seldom used in the cure of Fever.

DR. TILTON also remarks, that the Small-pox, Measles and Influenza, though from contagion and a cause permanent and immutably



immutably the same, yet they have not lately borne bleeding as they used to do; and very often in the latter Stages of these Fevers, the Bark, other Tonics and Cordials, become absolutely necessary.

“ THE Fever most prevalent with us this Winter and Spring, has usually attacked with congestion in the Lungs, resembling a Peripneumony; and yet the whole train of Symptoms indicative of Typhous weakness, such as Pain of the Head, dry Tongue, foul Mouth, sick Stomach, attended sometimes with Vomiting and Purging, so regularly ensued, that this Fever may be denominated *Peripneumonia Typhoides*.” “ Although at the beginning of this Fever a fullness of the Pulse, Pain of the Head, and aching Pains over the whole Body, might induce an incautious Physician to employ blood-letting; we have learned from repeated observation to withhold the Lancet, or to use it in the most guarded manner.”

C O P Y

COPY of a LETTER from Doc-  
TOR TILTON.

*Dover 20, April 1791.*

S I R,

IMMEDIATELY after writing my former Letter to you, I was seized with an indisposition that totally disqualified me for writing again so soon as I intended; and even at this time I cannot attempt more than a very general account of our Diseases.

THE medical History of Delaware, I apprehend, is peculiar in this circumstance, that a greater variety of Soil and Climate is comprehended within a smaller extent of Territory than can be found any where else. Within the narrow limits of a hundred Miles in length, upon the Delaware River, and the mean distance of about twenty-four Miles

D d back

back into the country, we have all the varieties of Soil and Climate to be found in the middle States of America. That district of Delaware, which lies above Christiana creek, is perfectly Mountainous both in Soil and Climate; and these Mountains extend their influence throughout New-Castle county, so as to give a distinction of climate for every ten miles you descend down the Delaware. From Apoquinimink creek to the lower end of the state, we have a level country, intersected at regular distances from five to ten miles, with creeks of tide-water, bordered with extensive marshes; and these creeks head in immense swamps, on the western border of the state, from whence the water falls, equivocally, either into the Delaware or the Chesapeake. Throughout this low and flat district, Marsh Miasmata and other noxious exhalations, must be a plentiful source of Diseases. Cape Henlopen, nevertheless, enjoys all the advantages of a perfectly insular situation; and

all



all the river shore, as well as the sea coast, find great relief from the sea-breeze; so that it is only the inland part of the country, where heat and stagnation concur to exalt the noxious exhalations of our low grounds, that our state can truly be said to be sickly.

FROM this general description of our state, the following account of the health and diseases of the inhabitants will be readily credited. The hills of Brandywine and Christiana, furnish as healthful a district of country as any in America. The Borough of Wilmington for health, beauty, and accommodation, is superior to any town I have seen, between the borders of New-England and the southern boundary of Virginia; and I have examined all the principal towns within those limits, in a comparative point of view. George-Town, on the Potowmac, the intended Federal Residence, is more analogous to Wilmington than any other, but manifestly the inferior of the two.

THE

THE town of New-Castle, though surrounded by marshy sprouts from the Delaware, is nevertheless rendered a healthful residence, by the refreshing breezes from the river that flow in upon the town as regularly as the tide. All the county of New-Castle, and especially above Apoquinimink, is a delightful district of country, though the nearer the river the more healthful.

KENT, though blessed with the most fertile soil, is the most sickly of the three counties of Delaware. Dover, the county town, and Metropolis of the State, is truly unhealthy. Situated eight miles within land, and shut out from all water communication by high timbered woods, the air of this district, in the hot season of the year, suffers exceedingly from stagnation.

SUSSEX county, though as flat and marshy as Kent, is fanned on one side from the Delaware, and on another from the Atlantic,  
and

and the woods being cut down in less proportion, than in the other counties, the abundance of forest trees, pour forth a refreshment to the air that contributes, with the sea breezes, to the health of the inhabitants.

LEWES, the county town of Suffex, stands upon the promontory of Cape-Henlopen, that stretches in between the Delaware and the Atlantic. This town is constantly fanned from the Ocean, and is as healthful as Bermudas. This place has furnished the longest lived inhabitants of our state. Here are the greatest proportion of old people, and the most numerous swarms of children. Lewes is much resorted to by convalescents from the inland country and neighbouring states, and deserves to be still more frequented. Sickly boys, and others with swelled Spleens and obstructed Viscera, from repeated and obstinate Fevers, are quickly restored to health, barely by a residence at Lewes. All manner of  
nervous



nervous weakness is relieved by the salutary Air of our Cape ; but Asthmatic and Hectic Patients should be cautious how they trust themselves there.

FREQUENT and sudden changes in the sensible qualities of our Atmosphere furnish another fertile source of Diseases. These changes depend solely on the course of the winds, and happen as often as the winds change. The wind blowing from between North and East, is generally cold and moist, except from June until September, when it is generally dry. From East to South comes our sea breeze, and is more salutary than any other. From South to West, the winds are hot, all the year round, and constitute our most noxious blasts. From West to North, the wind is at all seasons cold, dry in winter, and accompanied with gusts in summer.

THE most healthful season of our year is from the beginning of May, until the beginning

ing of August. During this period, the weather is less variable than at other seasons; and I have conceived, that the rapid progress of vegetation, during the Spring contributes not a little to render the Air salubrious.

IMMEDIATELY after Harvest, our endemical sickness begins. It generally increases throughout the month of August, and rages at its height during September.

BILIOUS, Intermitting and Remitting Fevers, differing only in degree and modification, constitute the principal group of our annual Fall Diseases. Dysenteries sometimes appear, but not oftener than in other countries; and it is remarkable, that Diseases of this kind oftener afflict the higher districts of New-Castle, than the flat counties of Kent and Sussex. The Cholera Morbus is a frequent Disease in the hot months; and the Cholera Infantum, as described by Dr. Rush, has of late years made great devastation among

mong our children, more especially in the town of Dover. A swelled Spleen and visceral obstructions, are no uncommon consequence of Fevers. Scorbutic and other putrid affections often make their appearance in unhealthful situations: And if our Remitting Fevers of the Fall are neglected or ill treated, they will often degenerate into the most perfect Typhus.

WITH the commencement of frost in October, the Fall Sickness abates in quantity, but wears very much the same type for a month or six weeks longer. The Bilious and Remitting Fevers of the Fall seem to lay the foundation of our Winter Fevers: for it is very remarkable, that those who have been the most harraßed by the Endemical Fall Sickness, are the most liable to the Synochous and Typhous Fever of the Winter. As to a simply Inflammatory Fever, in which local Inflammation is solely to be regarded, it is with us a rare occurrence indeed.

THE



THE proportion of sickness among our inhabitants is as various as the Soil and Climate. In the highlands of New-Castle, a man thinks himself quite unfortunate to be overtaken by an Epidemic Sickness, even in the fall of the year; whereas an inhabitant of the inland districts of Kent and Suffex thinks himself lucky to escape a year or two together.

IN Wilmington and Lewes, the countenances of the inhabitants never flag, but at all seasons witness the most vigorous health.

IN Dover every inhabitant suffers a deminution of health, during the fall season, and exhibits a more pale and languid face than at other times.

A PREVALENCY of South-West Winds above all things increafes and exalts our Fall Sicknefs ; but when the Easterly Winds prevail, during the fickly feafon, or frequent  
E e                      ſhowers

showers happen from the North-West, they afford us great relief. Those habitations that border on the water, and are openly exposed to the sea breeze, are every where healthy.

BOMBAYHOOK, though furrounded by immense Marshes, is nevertheless, next to Lewes, distinguished for the health of its Inhabitants. These several facts taken together, lead us to conjecture, that Marsh Miasmata will not altogether account for our Fall Sickness, nor the peculiar noxious influence of our South-West Winds, which injure us as manifestly by the sudden thaws they occasion in Winter, as by their parching heat in Summer.

It must be confessed, a great change has taken place in the Diseases of this part of the Country, as well of the hot as cold season of the year. I can remember when regular Intermittents chiefly abounded in the Summer and Fall, and simply Inflammatory Fevers

Fevers in the Winter. These now give place to severe Bilious Vomitings, and continued or Remitting Fevers in the Fall, and Synochous and Typhous Fevers in the Winter. Formerly we used Tartar Emetic more freely and to greater advantage than we can at present. Then, too, the Antiphlogistic method of treating Fevers served us well enough; now we have very little use for the Lancet.

OUR Bilious Vomitings are best treated by washing out the Stomach with warm demulcent Liquors, then quieting all disturbance with Anodynes, and finishing the cure with Aromatics, Bark, and other Tonic Medicines.

OUR Bilious and Remitting Fevers require evacuations more or less, have their exacerbations much relieved by Anodynes, and finally yield to the Bark.

IN the Cholera Infantum every irritating Medicine taken into the Stomach  
is



is injurious. To wash out the Stomach with Chamomile Tea and Chicken Water, is all the evacuation that can be attempted with advantage. Small doses of Laudanum in the day and full doses at night, become then the sovereign remedy. Bark and Camphor are most advantageously applied to the skin: But nothing more than a palliative cure can be expected, without removing the Patient, from the noxious Air that first gave the Biliary impression. For otherwise, if not killed outright, the Patient must languish under the repeated recurrence of the disorder, with such respites now and then as may be barely termed remissions, until the cold weather has made an entire change in the Atmosphere. In this case, therefore, we have recourse to the Bay Shore; and it is surprising the effects of snuffing the sea breeze for a single day. At Lewes I never heard of the Cholera Infantum; while at Dover it has for years past, swept off our children in a manner that is scarcely credible elsewhere. This puts the efficacy of the sea air in a strong point of view;

view; and I mention it that others may profit by our experience and observation.

THE Fever most prevalent with us in Winter, is precisely that described by D. Cullen, under the name of Synochus. Its first attack is generally attended with aching pains all over, and very often with considerable Pulmonic affections. Another local affection that often attends it is the Enteritis. The Symptoms that give us the earliest and surest warning of its true Type, are Headach and sickness at the Stomach. Gentle evacuations of the Stomach and Bowels are proper in the beginning; but Antimonials are to be used with caution. For the removal of local affections, we rely chiefly upon Blisters. The Lancet is never used but upon extraordinary and pressing occasions. Languor and weakness soon come on, and we watch the first opportunity of giving the Bark. The most free and liberal use of this important remedy is, at any time or Stage of the Disorder, warranted

warranted by a dry Tongue. Opium, Wine, Camphor, Volatiles, and all manner of stimulants are often employed in the course of the disorder, as necessary auxiliaries of the Bark. As soon as the Typhous form is correctly marked, the most cordial and nourishing diet is always used.

NUMEROUS observations persuade us, that our Typhous Fevers are more contagious than is generally apprehended. It is remarkable that more or less of a family will be affected in succession, when a Fever of this sort is introduced among them, according to the care observed in cleanliness and a free ventilation. The Typhus, therefore, is peculiarly noxious to negro families. It is so common to trace infection from one person to another, that the requisite care to guard the family and visiting friends from contagion, is among the earliest and most importunate instructions of our Physicians to their Patients.

THE



THE swelling of the Spleen and other visceral obstructions, are best relieved by aperient Gumous Medicines taken at the same time with Bitters, Aromatics and Tonics, and continued for a length of time. But a Patient once impressed with this kind of habit, is only to be secured from repeated relapses, by a change of Climate.

WE have incidental disorders in common with other people. But I suppose those only which are special and peculiar to our State to be to your purpose. These I have endeavoured to describe in a cursory way, as well as my time and state of health will permit.

THE census of the inhabitants of this State, taken for the first time, is not yet completed ; but I have reason to think it will amount to not less than seventy five thousand. There are no possible means of obtaining a register of annual births and deaths.

You

You will perceive at first sight, that my letter is a hasty performance, delivered only in general terms, and in that form and order in which the subject most naturally presented itself to my mind. But although neither the arrangement, language, or dress of this discourse should be of any use to you, the *facts* may be relied upon.

I am, Sir,

With great Respect,

Your most Obedient Servant,

JAMES TILTON.

*Dr. Currie.*

*An.*

*An* ACCOUNT *of the* SITUATION, CLIMATE, *and* DISEASES *of* MARYLAND.

THIS State is in length 134 Miles, and in breadth 110; is bounded North by Pennsylvania, East by the Delaware State, South East and South by the Atlantic Ocean; and by Virginia on the South and West; and is between  $37^{\circ} 56'$  and  $39^{\circ} 44'$  North Latitude, and  $4^{\circ} 30'$  West, Longitude from Philadelphia.

DIVIDED into the Eastern and Western Divisions by the Chesapeake Bay, which receives a number of the largest Rivers in the United States. The Rivers, however, which run through this State are commonly small, except the rapid Susquehanna, and the Patomac



tomac ; the latter of which is the boundary between it and Virginia.

EAST of the Blue Ridge of Mountains, which stretches across the Western part of this State, the Land, like that in all the Southern States, is generally level and free from Stones ; of course the Soil must be similar, as well as the generality of its natural productions.

THE Houses of the Inhabitants, who reside on Plantations, are often several Miles distant from each other, hence they appear to live very retired and unsocial lives ; and if we may be allowed to judge of the disposition and manners of Men from the expression of their countenances, the generality of them live dissatisfied and disconsolate.

THE behaviour of the People remote from towns, excluded from social intercourse, and the exchange of friendly offices, is expressive of

of indolence, and the most consummate ab-  
fence and indifference.

THOUGH Annapolis is the capital of the State, it is much inferior to Baltimore in respect to numbers and commercial advantages. The number of Inhabitants in Annapolis does not exceed 2000 ; in Baltimore there are above 15000.

DR. NUTTER gives the following account of the Diseases which occur on the Eastern Shore of Maryland.

“ THE Diseases which particularly infest the lower extremity of the Eastern Shore of Maryland are, in the Winter, the Synochus or the Typhoid Fever of Doctor Cullen. We have instances of Fevers with genuine Inflammatory Symptoms in this place, but these are not very common. Prac-  
titioners

tioners are so well aware of this, that they seldom use the Lancet freely."

"I HAVE observed that Fevers commencing with Inflammatory Symptoms soon go off, and leave the Patient in a state of great debility, with other Symptoms resembling the Typhus. These are observed to be very common in the Month of February, particularly after a general thaw."

"THE ground is uniformly level and low in most of the Counties on the Eastern Shore, and consequently in many places covered with stagnant Water, except where it is intersected with numerous Creeks. Here are also very large tracts of Marsh in this place, which load the Atmosphere with vapour in the day time, that falls down again in form of dew in the night in the after part of Summer."

THE



“ THE vernal and Summer Seasons afford the Inhabitants a respite from Disease.

“ THE few that do occur at these seasons are similar to those of more Northern Latitudes, but for the most part milder. The Cholera Morbus and Dyfentery, however, are very prevalent during part of the Summer, especially after extraordinary hot weather.

“ THE Inhabitants dread the approach of Autumn; and with reason, because at this Season Intermittents, Remittents, Diarrhæas and Dyfenteries prevail with astonishing violence, and frequently extend their ravage far and wide.”

“ THE ravages of the Influenza in 1789, were particularly observable in Caroline County, which place is also subject to the Diseases abovementioned in an extraordinary degree.”

By

By an account received from a Physician residing at Baltimore, it appears, that Dyenteries always become epidemical, or very frequent, there in the Autumnal Season, when cold and wet weather succeeds a long course of that which has been hot and dry.

“ THE Symptoms are generally slightly Inflammatory at the beginning, and yield to gentle Laxatives and diluting mild aqueous Drinks, and fomentations to the Abdomen; after which small Doses of Anodynes, combined with Tartar Emetic, complete the cure; and a relapse is prevented by exhibiting the Bark combined with a mild Aromatic.”

THIS corresponds in a great measure with the observations of Hillary, in his account of the Diseases of Barbadoes, who says, in Page 203, Edition 2d. “ I have always found from the best observations that I could make, on the variations of the Air and Weather in this Island, that if the Months of May, June, July, and August were very hot and dry, and the

the following Months of September, October, and November were accompanied with much Rain, so that the Air was rendered cool and damp, and if the intermediate days between the rainy ones were very hot, that Dysenteries were very frequent and Epidemical, and were generally more or less malignant, as the abovementioned changes of the Weather were greater or less, more sudden or more gradual, and shorter or of longer duration."

It appears from the observations of Hillary, that Dysenteries constantly return every year in the West-Indies with the Periodical Rains; hence it may be concluded, that cold and moisture operating on the Body in a certain State of Relaxation, are the principal causes of this Disease. From these and other circumstances, I am inclined to think the Dysentery is never an infectious Disease or communicable from one to another, except when combined with the putrid or Typhous Fever; and that Dr. Cullen has been  
mistaken



mistaken in ascribing it to specific infection ; but that it is generally, if not always, owing to the joint operation of Marsh Miasmata and external cold, or is the effect of human Contagion operating on the System, when the Intestines are in a relaxed and Atonic State.

Extract of a Letter from another Correspondent, residing on the Eastern Shore of Maryland.

“ O U R Summer and Autumnal Weather of one Year varies so little from that of another, that the same Distempers return so regularly with the Seasons, that they may be considered as Endemic. These succeed each other in the following order.

“ TOWARDS the end of July, young children (which I believe suffer first by excessive heat or cold in every Climate) are attacked with the Cholera, or a Bilious Diarrhæa.

IN

IN the following Month, Remittents, along the low moist country, are very general, and continue to increase daily till after the Autumnal Equinox, when they are succeeded by Quotidian and Tertian Agues. Dyenteries sometimes occur here; but I do not recollect the situations in which they are most common, neither have I seen a sufficient number of cases to be able to inform you of the method of treating them which succeeds best—But this I can say, that the generality of the Practitioners in the District where I reside, never puzzle their heads with the investigation of Causes, but depend upon the Store of Recipes recorded in Brooke's Practice of Physic, or Buchan's Family Physician.—If they succeed they are satisfied; if they fail, they console themselves with the most confident assurance, that every thing has been done *secundum artem*.

CHILDREN are often afflicted with a severe kind of Aphæ here in the Autumn and early

G g part

part of Winter, which often renders them scarcely able to swallow any kind of sustenance. This appears to be owing to a defective perspiration, and a relaxed state of the solids. And the remedies which I have found most speedy in removing it, has been the Warm-bath, Flannel Cloathing, and the Cortex in different forms ; and I particularly enjoin removal to the high dry Country, for the benefit of purer Air.

I have many times seen the Cholera, with regular periods like a Tertian, and the paroxysm of Tertians, attended with a Cholera. In a few Cases I have seen a Tertian changed into the Dysentery, and Dysenteries into Tertians ; and when one of these diseases has been suppressed, the other has sometimes ensued. I have also been told by other Practitioners, that it is very common for Dysenteries to put on the form of Tertians, and for the fits of Tertians to be regularly accompanied by gripes and stools.

“ From



“ From the accounts of Sir John Pringle and Dr. Monro, this disease appears to be contagious in Camps and Hospitals ; but I believe there are no proofs of its being so in private practice.”

The following account of the situation and Diseases of George-Town was communicated by Dr. W. Martin.—

“ GEORGE-TOWN is situate on the Banks of the River Patowmac, about an hundred and sixty miles from its entrance into the Chesapeake Bay. The ground on which it stands is very broken, being a cluster of numberless little hills, and which, though they at present lie very high above the surface of the River, have probably at some remote period been overflowed, as at the distance of eight or ten feet from the surface, marine shells have been found. There are no Diseases that I can obtain information of, or have met with myself, that can be considered

ed as peculiar to this place. No Endemics, nor any Epidemics, except occasionally introduced from other parts and propagated by contagion or infection. There are no marshy grounds nor stagnant waters near it. The country, though not in high cultivation, is yet sufficiently cleared to favour the salutary effects of free ventilation.

“ THE State of Society here, as it is not favourable to agreeable social intercourse, so also there are none of those complaints to be met with that arise from a too free use of the *bottle*, or excessive eating (I speak of the better class of people). On the other hand, the meagre Diet, chiefly *Indian bread* and salted fish, together with the insatiable desire for *Rum*, and a want of cleanliness among the lower ranks, often give rise to Diseases of extreme Debility; and to a cutaneous disease (which if any disease is endemic from its general prevalency this is) called the Itch (*Pfora*).

“ In

“ IN short, the state of diseases are so nearly similar to those with you, that it is scarce necessary to enumerate them. In the Winter and Spring we have Pneumonia, Rheumatism, Sore-throat (*Cynanche Tonsillaris*) Catarrh, &c. In the Summer Cholera and Diarrhœa. In Autumn, now and then a case of Remittent; Intermittents less frequently.

“ IN the Cure even of inflammatory Diseases, we find more success in moderate and frequent than in copious Venæsection. Our greater position to the Southward than you, the longer continuance of our heat in Summer, as well as of its greater intenseness, renders the Bodies of the inhabitants more relaxed, and consequently more disposed to diseases of debility, such as Idiopathic Fevers and Diarrhœas, than in more northern latitudes, and certainly occasions the symptoms in phlogistic cases to be more mild.

“ UPON



“ UPON the whole, George-Town and its vicinity, may be considered as a healthy part of America ; and in any disputes about the propriety of the seat of the General Government being fixed here, no objection can be urged against it on account of its Diseases.”

DR. JOHN SHAFF acquaints the Author, that Annapolis the Capital of Maryland “ is probably one of the most salutary situations on the Continent, the number of inhabitants small, that he rarely meets with any but sporadic Cases of Typhus, and that their other Fevers are mostly of the Intermitting, Remitting, and inflammatory Type.”

DR. JOHNSTON, of Baltimore, informs that he has met with numerous Cases of Dysentery in situations out of the reach of Marsh Miasmata.

IN the Diarrhœa of Children he is of opinion, that Dentition, if not the Cause of the Disease,

Disease, has a great share in aggravating it, by increasing the irritability of the System. “ The Thebaic Tincture in small doses; Alum, Com. dissolved in spring water, coloured with Coccinella so as to give a grain in a tea spoonful, is the usual dose and manner in which I give that medicine, after every loose stool, to a child of six or eight months old to a year, and increase it in proportion to the age. To women with the same complaint, who give suck, and in many cases of Dysentery, after clearing the *Primæ Viæ* with Ipecacuanha, I give Allum. Com. from five to ten grains, with as many drops of Thebaic Tincture. I direct infants of all ages to be bathed in cold water, if the weather is hot, either by a partial application of it to the head and shoulders, or by immersion; after which they are rubbed dry, and wrapped up in flannels, to bring a glow of heat to the surface, and promote the good effects of that reaction, which the sudden application of cold rarely fails to produce.

“ SOME

“SOME of our Medical Gentlemen are very fond of the Gum Kino in the Diarrhœa Infant. I have used it ever since Dr. Fothergill published his opinion of it in the 1st. Vol. Lond. Med. Observations ; but I am convinced that the alum is best by itself, or in red wine more effectually to disguise it.

“I REFER you to Vanswieten’s Commentaries, Vol. ix. Section 923, for a solution of your other enquiries, &c.”

*Extract of a Letter, dated Dorchester, February 18th, 1790.*

AFTER giving a similar account of the Diseases more or less epidemic at particular Seasons with those already inserted, a Physician whose name I have not permission to mention, informs me, that Dropical Cases are very frequent in that part of the country where he practises ; and that he has been generally successful in curing them by  
 I the



the *Digitalis* in decoction, which he prefers to the powder.—For particulars he refers to a paper on the Dropsy by Erasmus Darwin, published in the Medical Transactions of the London College of Physicians; of which the following is a copy.

“ BOIL of the fresh green leaves of the *Digitalis Purpurea*, or Fox-glove, 4oz. in common water from two pints to one, and add to the strained liquid of vinous spirit, 2oz.

“ OF this Decoction one large table spoonful is to be given early in the morning, in every variety of Idiopathic Dropsy, whether in the form of Hydrocephalus, Hydrothorax, Ascites, or Anasarca; and should be repeated every hour till the Patient has taken from three to eight or nine spoonfuls, or till sickness or some other disagreeable sensation is induced.

THE Hydropic fluid generally disappears

H h

on

on the next day, or on the third day, without any repetition of the medicine, and frequently without any apparently increased evacuation ; at other times, with Vomiting and a large flow of Urine, and sometimes with purging stools.

To some whose constitutions appeared to be robuster, the dose was increased to half or a whole spoonful more, if the first two or three single spoonfuls occasioned no nausea. But as some of these Patients complained of very great debility during its operation, it was judged more prudent to use rather an under than an excessive dose. In some, who had been two or three times relieved by the same method in the space of eight or ten months, a less quantity was found to succeed: To these, half an ounce of the decoction, mixed with an ounce of simple Peppermint-water, or with a decoction of Bark and Snake-root, was given twice or thrice a-day, for two or three successive days.

“ ON

ON the day after the exhibition of the *Digitalis*, or on the third day, or as soon as the sickness occasioned by it ceased, an infusion of the stem leaves of Artichoke, or a strong Decoction of the Bark, with a small quantity of some Chalybeate Medicine, (of which I give the preference to the Flores Martiales, from two to six grains, or in lieu of this, the Vitriol Martis, or common Copperas, as it is improperly called, from one quarter of a grain to two grains, dissolved in some Aromatic Water, or mixed with Syrup of Ginger) was generally given twice a-day, and one grain of Opium every night, with as much Rhubarb or Aloes as occasioned a stool next day. This quantity of Opium was persisted in for some weeks, without increase or diminution, as it seemed to be particularly serviceable.

THE convalescent Patients were allowed to eat flesh Meats, if their Stomachs could bear it, twice or thrice a-day, and also Shell-Fish  
and



and Eggs, Spiceries and aromatic Vegetables, particularly Cellery and Water-creffes, Pepper-grafs, &c. They were alfo advifed to drink half the quantity of any Liquor to which they had formerly been accuftomed, except of diftilled Spirits, which was always prohibited, except where Dyptic fymptoms rendered them really neceffary.

“ IT is obfervable, that when a fufficient dofe of the Foxglove Decoction is given at firft to produce the effect defired, a much lefs quantity will have the fame effect afterwards. This I fuppofe is owing to the facility our Conftitutions poffefs of acquiring habits of action after having been excited by adapted ftimuli.

☞ THUS if ten grains of Aloes be at firft exhibited as a Cathartic, the dofe may be gradually decreafed to one grain, and it will ftill produce the fame effect, the conftitution having acquired a habit of obeying its ftimulus.

mulus. On the contrary, if one grain of Aloes be at first exhibited, and does not Purge the Patient, it may be increased by slow degrees to twenty grains without proving Cathartic.

“ HENCE Drunkards who begin with large quantities of strong Liquors, become at last intoxicated with small ones ; while those who do not quite inebriate themselves daily, will be enabled at length to quaff whole gallons without intoxication.

“ I BELIEVE the Hydrocephalus Internus is more frequent with us than with you ; and am of the same opinion with you, that it is often present when the Patient’s eyes are not affected with Strabismus. I believe Whytt and Fothergill have both given accurate descriptions of the Disease as it frequently appears ; the former having only observed it in a Chronic state, the latter in an Acute one.

“ I

“ I THINK the inference drawn by Quin from the case he dissected, in which he found marks of Inflammation instead of Water in the ventricles of the Brain, should have no weight.

“ I HAVE seen more than twenty cases of this disease, the greatest part of which died of it. I have taken particular pains to enquire into the rise and progress of the symptoms of every one that ever came under my notice, and I have now been in practice in different parts of Maryland thirty-four years; but have never met with a single case where the disease was immediately preceded by an inflammation of the Brain, or its investing Membranes.

“ BUT whatever be its remote or occasional causes, its proximate cause is a relaxed or atonic state of the Exhalents which terminate, and of the Absorbents which originate in the ventricles of the Brain.

THIS



“ THIS complaint has often been mistaken for symptoms supposed to be occasioned by Worms. That Worms may, and sometimes do, occasion Convulsions in very debilitated and irritable constitutions, by the irritation they are capable of giving, I have no doubt ; but I believe they seldom occasion either Fever or Delirium ; at least, I have never seen a case where, I think, those symptoms could be fairly ascribed to these reptiles. I have opened several Negro Children here, who were supposed to have died of what is erroneously called the Worm Fever ; but instead of meeting with any Worms, have frequently found Tubercles and small Vomicas in their Lungs, of which there was no suspicion while alive.”

OUR Planters, who are generally hard Drinkers, are frequently afflicted with the Rheumatism as they advance in years. This, though frequently accompanied with phlogistic Diathesis at first, soon degenerates  
into

into the opposite extreme, and depends upon an atonic state of the Muscular Fibres. Under such circumstances, the stimulus of external heat, confined by flannel clothing next to the skin, a strong decoction of the Cortex and Serpentaria, with the moderate use of Brandy and Water, and the moderate and regular use of Animal matter, in form of Soups and Jellies, the occasional use of Opium, to mitigate Pain, seldom fail to cure the disease; whereas Purging and Abstinence never fail to prolong it, especially when Chronic and free from Phlogistic Diathesis.

THAT Dyfenteries do not always depend upon Contagion, appears from this, that they often occur here in rainy weather in February, at least we have Diarrhœas, accompanied with Tenesmus, and preceded by a cold stage, or frequent thrilling sensations, and all the other characteristic symptoms described by Dr. Cullen, which generally yield to the treatment and medicines he recommends.

WHEN

“ WHEN the Gout occurs, I treat it in the very same manner as I do the different stages of Rheumatism ; and am of opinion, that Sydenham’s erroneous theory has retarded our improvement in medicine, particularly in the cure of this disease, more than all other circumstances put together.

“ WHERE the pulse, pain and heat indicate, I bleed and purge without reserve, and enjoin the antiphlogistic regimen ; where these symptoms are absent, and symptoms of debility, and loss of appetite, or sickness at stomach is distressing, I as freely and without reserve, have recourse to small and repeated doses of Laudanum, sound and pure Wine, Blisters, the Hot-bath and Flannel Cloathing ; and when in a convalescent state, Decoctions of Bark, Snake-root, and the artificially made Mineral Waters, impregnated with fixed Air, (for which purpose I have provided myself with Nooth’s Machine) with exercise, and regular but not abstemious living.



“PEOPLE who declaim against the use of Spirituous Liquors, should always consider climate and situation. In colt or even temperate climates I believe they may generally be dispensed with; but that man must be a superficial observer, who condemns the moderate use of them, when relaxed by the intense and long continued Summer heats of this climate, or in any climate, when exhausted by fatiguing exercise.

“THEY are particularly necessary to prevent Dyspepsia, where much vegetable and little animal matter is used.

“THE insensibility of the System is astonishing, in many cases of Hydrocephalus Internus; I have frequently given four grains of the best Calomel for four successive days, three times a-day, to Children of three or four years of age, without producing any sensible effect; and when it does operate, it is generally by stool, seldom or ever, except  
when

when combined with Opium, upon the Salivary Glands of young children.

“ I THINK I have seen five or six marked cases of this Disease cured by persisting in its use, and supporting the Patient with, Vinous Drink, and a liquid cordial Diet ; Blisters might be applied to the Head or Neck, at the same time as coinciding with the intention of the other remedies.

“ WHEN Friction is employed, it ought to be used in four times the quantity that might be requisite in almost any other Disease, because of the extraordinary insensibility to its stimulus in this.

“ As you have Dobson's communications on this subject, and can see the sentiments of others in Duncan's Commentaries, I shall trouble you no farther with my imperfect thoughts on the subject at present ; but I  
cannot

cannot prevail on myself to conclude, without a short animadversion on the new and inconsistent Doctrine taught and published by the late Dr. Brown of Edinburgh. This man (whose talents I admire, and if he had employed them in the service of truth, I should have venerated) has had the presumption to assert, that there is not a direct Sedative in nature. What then are the contagions which produce different species of Idiopathic Fever, Dysentery, and Pestilence? If the primary operation of these is to produce weakness, are they not direct Sedatives in the strictest sense of the term. Does their operation consist in the privation or abstraction of Stimuli? (which they ought to do consistent with one of the fundamental principles of this Doctrine). By no means.—Do they produce their effects by their exciting power, wasting the excitability, and producing weakness of the indirect kind by that means?——Surely no, for they are assisted in their effects by

Hunger,



Hunger, Cold, Grief, which are privations or abstractions of stimulant powers. On the contrary, their effects are retarded or counteracted by Stimulant Powers. These Contagions operate slowly, and the Patient feels indisposition for several days before he is seized with Fever.

“ WINE induces indirect weakness, but the System is first excessively stimulated.

“ BY simply drawing into the Lungs a considerable portion of fixed Air, issuing from any fermenting liquor, a healthy man is instantly killed, whereas if the atmosphere, or the dephlogistified Air, which forms the greatest portion of it be excluded for several minutes, he is not deprived of life ; but if animation or motion, the effects of animation, be suspended thereby, he may generally be restored by inflating his Lungs with pure atmospheric Air again.

THIS

“ THIS has been fully proved by the experiments of the late ingenious Dr. Edmond Goodwin, in his Essay on the Connection of Life with Respiration ; from whence it appears, that the generality of drowned persons may be restored to life by the application of external heat to the body, gradually applied, till it equals that of an inflammatory Fever, or 112 degrees of Fahrenheit’s Thermometer; after which, and not before, the Lungs are to be inflated by a pair of bellows, passed into one of the nostrils, giving five or six blasts successively, and then intermitting half a minute or more, to observe the effect, &c.

“ IN order to produce the requisite heat, the Hot-bath is the best means ; but when that cannot be procured, the Patient should be laid on hot salt, or ashes, which should be covered with a woollen blanket, and himself covered with three or four others, well-heated. Heated Salt, Ashes, or Sand in Woollen Bags, or Jugs of boiling Water, especially

pecially the latter, being applied to or near his feet at the same time." Excuse me for transcribing what I am sure you have often perused in the work at large.

" To conclude, the fair deduction from the Doctrine of Mr. Brown, is, that, as no Disease can survive its Cause, it must cease of necessity in all Cases where the excitement is to excess, as soon as that excessive excitement is reduced by the abstraction of Stimulant Powers to a certain point at which Health is supposed to rest; and that in all cases of Debility, where the excitement is below the healthy point of the imaginary Scale, it must also necessarily cease so soon as a sufficient number of Stimuli have been applied, as the System must be thereby raised to that point; or if too violent Stimuli be applied, so as to raise the excitement beyond that point, it will be changed into a Disease of the opposite nature and form.

As



“ As it is the duty of every one to point out such errors as have a tendency to mislead, or prove injurious, I hope you will pardon me for digressing so wide from the object of your enquiries, and believe me to be, &c.”

A S K E T C H

OF THE

SITUATION, APPEARANCE, AND CLIMATE

OF

*V I R G I N I A.*

---

**T**HIS State is in Length 758 Miles, and in Breath 224; between  $36^{\circ} 30'$ , and  $40^{\circ}$  North Latitude, &c.

BOUNDED East, by the Atlantic Ocean; North by Pennsylvania and the river Ohio; West by the Mississippi; and South by North-Carolina.

EAST of the Blue Ridge of Mountains, the Land is level and low, like that of Maryland.

K k

THE

THE Mountains in this State commence about 150 Miles from the Sea-Coast, and are disposed in Ridges, one behind another, running nearly parallel with the Sea Coast.

THE Alleghany is the great Ridge which divides the waters of the Atlantic from those of the Mississippi; its summit is doubtless more elevated above the Ocean than any other Mountain: But its relative height compared with the base on which it stands, is not so great as that of some others.

THE Mountains of the Blue Ridge (and of these the Peaks of OTTER, are thought to be of greater height, measured from their base) are higher than any others in Virginia, or perhaps in North-America. The highest Peak is said to be 4000 feet perpendicular, which is not a fifth part of the height of the

\* Mountains



\* Mountains in South-America, nor one-third of the height which would be necessary in this latitude to preserve ice unmelted in the open air through the year. The Ridge of Mountains next beyond the Blue Ridge, (called the North Mountains) is of the greatest extent.

“ There are several Medicinal Springs in Virginia. The most efficacious of these are, two Springs in Augusta, near the first sources of James river, where it is called Jackson’s River.

“ They rise near the foot of the Ridge of Mountains generally called the Warm Spring Mountains,

\* In South-America, the Andes or Cordilleras run from North to South along the Coast of the Pacific Ocean. These Mountains extend 4300 miles, from the Isthmus of Darien to the Straits of Magellan. Their height is as remarkable as their length, the highest being 20,633 feet, of this about 2,400 from the summit, are always covered with snow, though in part within the torrid Zone.”

*Guthrie’s General Description of America.*

Mountains, but in the Maps, Jackson's Mountains. The one is distinguished by the name of the *Warm Spring*, and the other the *Hot Spring*. The Warm Spring issues with a very bold stream, sufficient to work a grist-mill, and to keep the waters of its basin, which is 30 feet in diameter, at the vital warmth, viz. of 96 degrees. The matter with which these waters are allied is very volatile; its smell indicates it to be sulphureous, as also does the circumstance of its turning silver black. It rains here four or five days in almost every week. The *Hot Spring*, which is about six miles from the Warm, is much smaller. It raises the Mercury in Fahrenheit's Thermometer to 112 degrees, which is fever heat. A fountain of common water issuing within a few inches of its margin, gives it a singular appearance. Comparing the temperature of these with that of the hot springs of Cam-schatka, of which Krachininnikow gives an account, the difference is very great, the latter raising the Mercury to 200 degrees, which is within 12 of boiling water.

“ \* There

“ \* There are sweet springs in the County of Boutetourt, at the Eastern Foot of the Alleghany, about 42 miles from the Warm Springs. These are as cold as common spring water.

“ On the Patowmac river, in Berkley County, above the North Mountains, are Medicinal Springs much more frequented than those of Augusta, though their waters are much weaker mineralized, and scarcely warm. They are more frequented, because situated in a fertile, plentiful, and populous country, better provided with accommodations,

\* These Springs have been analyzed by James Madison, Esq. by which it appears that they have been falsely called sweet, their taste being evidently acidulous. The experiments also prove, that they contain an acid. Their taste resembles exactly that of Waters artificially impregnated with fixed air, extricated from Chalk by means of Vitriolic Acid, and is nearly the same with the true Pyrmont Waters. Other Experiments show, that these Waters contain neither Sulphur nor Iron. Their efficacy is highly extolled, (whether deservedly or not I cannot resolve), in many Chronic Diseases, and particularly in Consumptive and Scrophulous Complaints.



tions, always safe from the Indians, and nearer to more populous States. There is a weak Chalybeate at Richmond, and many others in various parts of the State, but of too little note to be enumerated after these already mentioned."

(JEFFERSON.)

## C L I M A T E.

" IN this extensive State it is not to be expected, that the Climate should be the same in all its parts.

" It is remarkable, that proceeding in the same parallel of latitude westwardly, the Climate becomes colder in like manner, as well as when you proceed northwardly.

" THIS continues to be the case till you attain the summit of the Alleghany, which is the highest land between the ocean and the Mississippi. From thence descending in the same latitude to the Mississippi, the change reverses;

reverses; and if we may believe travellers, it becomes warmer there than it is in the same latitude on the Sea-side. Their testimony is strengthened by the vegetables and animals which subsist and multiply there naturally, which do not on the Sea Coast.

Catalpas grow spontaneously on the Mississippi as far as the latitude of  $37^{\circ}$ , and Reeds as far as  $38^{\circ}$ . Paroquets, even Winter, in the Scioto in the 39th degree of latitude."

" The difference of temperature in the Air at the Sea Coast, or the Chesapeake-Bay, and at the Alleghany has not been ascertained; but cotemporary observations made at Williamsburgh, or in its neighbourhood, and at Monticello, the latter of which is situated nearly central between the Bay and Alleghany, or between the Southern and Northern Boundaries of the State, may be considered as furnishing the best average of the temperature of its Climate. These Observations  
make

make the difference between Williamſburgh and Monticello, to be on an average  $6\frac{1}{8}$  degrees of Fahrenheit's Thermometer.

“ WILLIAMSBURGH is much too near the South-East Corner to give a fair idea of the general temperature.

“ BUT a more remarkable difference is in the Winds which prevail in the different parts of the Country.”

FROM Mr. Jefferſon's Meteorological Tables it appears, that the South-Weſt Wind prevails equally at Williamſburg and Monticello; that the North-Eaſt is next to this the principal Wind towards the Sea-Coaſt, and the North-Weſt is the predominant Wind at the Mountains. The difference between theſe two Winds to ſenſation, and in fact, is very great; the North-Eaſt is loaded with vapour, inſomuch that the Salt Manufacturers have found that their chryſtals would not ſhoot while



while that blows, it occasions a distressing chill, and a heaviness and oppression of the spirits. The North-West is dry, cooling, elastic, and animating. The Eastern and South-Eastern breezes come on generally in the afternoon. They have advanced into the country very sensibly within the memory of people now living. As the lands become more cleared, it is probable that they will extend still farther Westward. The farther they extend into the Country, the less moist they become, as they deposit it in their progress.

“ The variation in the weight of the Atmosphere, as indicated by the Barometer, is not equal to two inches of Mercury. During twelve months observation at Williamsburg, the extremes were 29 and 30.86 inches, the difference being 1.86 of an inch; and in nine months, during which the height of the Mercury was noted at Monticello, the extremes were 28.48 and 29.69  
 L 1                      inches,

29.69 inches, the variation being 1.21 of an inch. A Gentleman, says Mr. Jefferson, who has observed his Barometer many years, assures me it has never varied two inches.

“ Cotemporary Observations, made at Monticello and Williamsburgh, proved the variation in the weight of the Air, to be simultaneous and corresponding in these two places.\*

“ THE changes from Heat to Cold, and Cold to Heat, are very sudden and great. The Mercury has been known to descend from  $92^{\circ}$  to  $47^{\circ}$  in thirteen hours.

“ THE following Table contains the Result of five years Observations respecting the average State of the Heat for every Month in the Year, at Williamsburgh, which is the hottest part of Virginia; viz. from 1772 to 1777.

Least

\* If these Observations are accurate, Monticello must be at an equal height from the level of the Ocean with Williamsburgh, for the Mercury in the Barometer falls one-tenth of an inch for every 90 feet perpendicular, that we ascend above that level,

	Least and greatest daily Heat by Fa- renheit's Thermo- meter.		
January	$38\frac{1}{4}$	to	44
February	41	—	$47\frac{1}{2}$
March	48	—	$54\frac{1}{4}$
April	56	—	$62\frac{1}{2}$
May	63	—	$70\frac{1}{4}$
June	$71\frac{1}{2}$	—	$78\frac{1}{2}$
July	77	—	$82\frac{1}{2}$
August	$76\frac{1}{4}$	—	81
September	$69\frac{3}{4}$	—	$74\frac{1}{4}$
October	$61\frac{1}{4}$	—	$66\frac{1}{2}$
November	$47\frac{3}{4}$	—	$53\frac{1}{2}$
December	43	—	$48\frac{1}{4}$
8 A. M.   4 P. M.			

This Table pro-  
poses to state only  
the ordinary Heat  
and Cold of each  
Month, and not  
those which are ex-  
traordinary.

AT Williamsburgh, in August 1777, the Mercury in Farenheit's Thermometer was at  $98^{\circ}$ , corresponding with  $29\frac{1}{2}$  of Reaumur. At the same place, in January 1780, it was  $6^{\circ}$ . corresponding to  $11\frac{1}{2}$  below 0 of Reaumur. I believe these may be considered as the extremes of Heat and Cold in that part of the country. The latter may most certainly, as at that time York River at Yorktown was frozen over, so that people walked across it; a circumstance which proves it to have



have been colder than the Winter of 1740-1, usually called the *hard* Winter, when York River did not freeze over at that place. In the same season of 1780, Chesapeake-Bay was solid from its head to the mouth of Patowmac.

AT Annapolis where it is  $5\frac{1}{4}$  miles over between the nearest points of land, the ice was from five to seven inches thick quite across, so that loaded carriages went over on it.

THOSE extremes of Heat and Cold, at  $6^{\circ}$  and  $98^{\circ}$ , Mr. Jefferson observes, were indeed very distressing, and were thought to put the human constitution to the extent of trial. Yet, continues the same respectable Author, a Siberian would have considered them as scarcely a sensible variation.

AT Jennefeitz, in that country, in latitude  $58^{\circ} 27'$ , we are told, that the cold in 1735 sunk the Mercury by Farenheit's Scale to

126°

126° below nought ; and the inhabitants of the same country use stove rooms two or three times a week, in which they stay two hours at a time, the Atmosphere of which raises the Mercury to 135° above nothing.

LATE experiments shew, that the human body will live in rooms heated to 347 degrees, that is 135°. above boiling water.

THE hottest point of the twenty-four hours is about four o'clock, P. M. ; and the dawn of day the coldest.

ON comparing the extremes of Heat and Cold at Williamsburg, with the same at Paris, it appears they are in greater at Paris.

THE access of Frost in Autumn, and its recess in the Spring, do not seem to depend merely on the degree of Cold ; much less on the Air's being at the freezing point. That other circumstances must be combined with the Cold to produce Frost, is evident from

from this also, that on the higher parts of Mountains, where it is absolutely colder than in the plains on which they stand, Frosts do appear so early by a considerable space of time in Autumn, and go off sooner in the Spring than on the plains\*. This greater privilege against the Frost on Mountains, is undoubtedly combined with the want of dew there. That the dew is very rare in their higher parts, I may say with certainty, (says Mr. Jefferson) from twelve years observations, having scarcely ever seen during that time, an unequivocal proof of its existence at all on them during Summer.

That unfortunate fluctuation between Heat and Cold, so destructive to Fruit, prevails less in Virginia than in Pennsylvania in the Spring Season; nor is the overflowing of the  
Rivers

\* In the Summer Season, the Vapours by the time they attain to the height of the Mountains become so attenuated, that they have not sufficient gravity to subside, and form a dew when the Sun retires.

*Vid. Jefferson's Notes on Virginia, page 87.*



Rivers in Virginia so extensive or so frequent at that Season, as those of the New-England States ;—because the snows in the former do not lie accumulating all Winter, to be dissolved altogether in the Spring, as they do in the latter.

IN Virginia below the Mountains, the Snow seldom lies more than a day or two, and seldom a week ; and the large rivers very seldom freeze over. This fluctuation of weather, however, is sufficient to render the Winters and Springs very unwholesome, as the inhabitants have to travel in almost perpetual stop.

*Extract of a letter from a Physician at Petersburg, in Virginia, dated December 8th, 1790.*

“ IN the Winter and Spring, reckoning from January to the Summer Solstice, our epidemic Diseases are principally Rheumatisms and Catarrhs; seldom any genuine Pleurisy, but a spurious and complicated kind is very common, accompanied with great prostration

prostration of strength, Sicknefs, and Vomiting, Coma or Comatose Delirium, as well as pain in the Thorax, Cough, and difficulty of Breathing, and is the most mortal Disease we have, to Adults. The Remedies which the Physicians of this place have found most successful in this Disease, have been a repetition of mild Emetics, and the application of Blisters to the Wrists, as well as to the parts affected, and a few Drops of Laudanum, and Antimonial Wine, every three or four hours, in a Draught of Barley Gruel, or Tea made of Linseed and Sage, for the first two or three days after its attack; but if the debility increases, we find nothing equal to Volatile Alkaline Salts and Wine Whey. Good effects have also been sometimes produced by a Decoction of the Seneca Root, given in such Draughts as to create a slight nausea. Bleeding has been observed to aggravate the Disease so frequently, that the lancet has almost fallen into discredit. I however, always venture to open a vein when the pain is acute, and the respiration difficult, and sometimes

a repetition, but am very cautious in the quantity drawn at once. The lowness of our situation, and the long continued and excessive heats to which we are subject, render us amazingly infirm, and occasion a Diathesis of so lax a texture, that an inflammatory affection cannot exist many days without terminating in a gangrene. I have sometimes had thoughts of trying the effects of Mercurial Frictions in this Disease, because of the analogy it bears to the Hepatitis which occurs in hot Climates; but have hitherto been deterred from the attempt, owing to certain conscientious scruples.

“ I HAVE sometimes followed the method recommended by Dr. Hamilton, in the management of Inflammatory Diseases, and have given from one to three grains of Calomel, and from one-fourth to a grain of Opium, and as much Tartar Emetic, to which I have sometimes added a few grains of Camphor, made into a Bolus with conserve of Roses,

M m

every



every fix or eight hours, for several days, accompanied with a Decoction of Seneca, Sarfaparilla, and Liquorice Root, and in some Cafes with immediate and evident advantage; but I muſt ingenuouſly confeſs, that the major part of the Cafes in which I have employed it, as well as every other Remedy, has hitherto failed with me.

“ THE extreme weakneſs and dejection, hinder large and repeated Bleedings, which are the only things capable of removing genuine Inflammations.

“ FROM the Summer Solſtice till after the middle of September, Choleræ and Diarrhœas are epidemic here, and are ſo mortal among Children that it has given riſe to a common, but very erroneous notion, that none born here ever arrive to Manhood, whereas I am very certain, that more than two-thirds of the number born here annually, do not die the ſame year; what proportion arrive

arrive to Manhood, I have not been able to ascertain as yet, but shall set about the enquiry as soon as I have leisure.

“ THE Flux commonly occurs about the middle of August, and continues more or less epidemic till the Frost sets in, which is seldom before the middle of October.

“ THIS Disease does not occur every year; is more common in cool and wet Summers than in warm and dry ones. I am sorry, that it is not in my power to resolve your question about its being infectious; but from the prevalence of that opinion, and from the account given by Lind, in his papers on infection, I am inclined to think it is.

“ OUR Plan of Cure in this Disease differs considerably from that recommended by Dr. Cullen:—We trust principally to Decoctions of Bark, Snake-root, and Rhubarb, with the liberal use of Opium, and Vinous, or other  
Spirituos

Spirituous Drinks ; and when the debility is great, we employ the Hot-bath, and apply Rubefacients to the Abdomen and Limbs. This treatment perhaps, in a different situation, would be improper and injurious ; but I declare upon my honour, it seldom fails curing the Disease in this place, where it is punctually adhered to.

“ OUR Intermitting and Remitting Fevers begin very early in Autumn, and continue to be more or less epidemic till the middle of Winter, especially the former.

“ In the Cure of the Remitting Fever, we find the bark by no means effectual, without the liberal use of Wine ; and in very relaxed habits, we find it necessary to have recourse to Brandy ; this last, taken in small quantities, and repeated every hour, without any addition, has succeeded with us in many Cases of Remittent, accompanied with great Dejection of Strength and Depression of Spirits,



rits, when the Bark alone has had every appearance of aggravating the Disease. Huxham's Tincture is considered as a Catholicon.

“ FROM these circumstances you will be led to think us all Drunkards ; this, however, is by no means the case. We live full, and drink freely, but seldom so much as to induce intoxication. But the Heat of our Climate, and our confined situation, (being shut out from the access of the Winds, by high hills on every side) has such an effect on our Constitutions that they very nearly resemble those of hard Drinkers ;—hence, we require a considerable quantity of Stimulating Aliment, and Vinous Drinks, to keep up a balance between the several functions of the body.

“ I HAVE never met with any Case of Tetanus, but what arose in consequence of a lesion of a nervous part ;—and though I have the highest Veneration and esteem for Dr. Rush,

Rush, whose experience and ingenuity stand unrivalled in our Country, I have never yet had the courage to omit the employment of Opium in large Doses, repeated every 4th, 6th, or 8th hour, while any Spasmodic Symptoms remained, along with the liberal use of hot Brandy-Tody, and high seasoned Soup, in which Cayenne Pepper, was a principal Ingredient.

“ I HAVE read both Sydenham and Brown, and though I think them both eccentric and erroneous in many things, I am convinced a man of judgment may derive instruction from them both.”

COPY of a LETTER from Dr. JAMES  
LYONS.

“ *Dear Sir,*

“ I HAD the honour of receiving your favour of March the 6th, which mentions your having undertaken a Work, the utility  
of

of which has been long impressed on my mind; and the execution of which I once had in contemplation, though on a scale less extensive than the one you propose. It occurred to me soon after my return from Europe, that an account of the Climate, modes of Living, and the Diseases of the lower parts of Virginia, after the manner of Cleghorne's Minorca, might be of some service in investigating the Causes and improving the treatment of the Epidemics, and perhaps might induce the Medical Gentlemen dispersed over other parts of the State, to record and publish their observations, so as to form altogether, a book of useful practice. The interruption which would have been given to my business, however, and finding that more experience and time would be requisite than I could conveniently spare, prevented my pursuing the idea. From your advantageous situation, and your endeavours to collect information, there can be no doubt, but the performance will receive all the advantage which the assistance of able and experienced Practitioners,



ers, united with your own observations, can afford ; and I am sorry that professional engagements, mostly in the country, and the short notice, will not allow me to answer your queries to my satisfaction.

“ I AM at present residing in Hanover-town, which is situated nearly at the head of navigation, on the South side of Pamunkey, the principal Branch of York River. It contains about one hundred and seventy\* inhabitants, and is supported chiefly by Merchants, who have placed themselves here for the convenience of purchasing the best Tobacco in the State, which is supposed to be brought to the public warehouses at this place.

“ IT was thriving fast before the seat of government was removed to Richmond; †  
but

\* The County of Hanover, by the late Census, contains 14,300 Inhabitants.

† Richmond, the present Seat of Government in this State, is built upon a commanding eminence on the North side of James's River, a little way below the Falls, and ninety miles from its mouth, contains about 360 houses, and 2000 inhabitants

but that city being only twenty miles distant, has considerably altered the channel of trade and retarded its increase. The town is built on an extensive plain, and the lands for many miles above and below it, are remarkably level and fertile, and the country in those directions is generally thought the most beautiful in Virginia ;—but if its inhabitants possess superior advantages in the kindness of their soil, they suffer almost a proportional deduction from their profits and other enjoyments, by being exposed to attacks from the Intermittent and Remittent Fevers, for two or three months in every year.

“ THE Country may be divided into low grounds, second low grounds or more elevated, and the hills, which commence where the latter terminate. The former which  
N n                    constitute

ants. This Town is about sixty miles Westward of Williamsburgh, which contains about nine hundred inhabitants, and is about twenty-five miles Northward of Petersburg. This town is built on the South side of Appomattox River, in a low situation.

constitute the banks of the river, are subject to frequent inundations in the Spring and Fall; and many of them retain so much moisture throughout the year, as only to be fit for pastures, and are never cultivated. You will readily, therefore, conceive their situation towards the end of Summer, when the putrid exhalations go on rapidly, and you will also anticipate a description of those Intermittent and Remittent Fevers which Marsh Miasma so constantly produces. They are mostly Quotidians or Tertians; Quartans are seen but seldom, but if not speedily cured, are apt to continue twelve, eighteen months, or two years, especially with poor people; and I have seen fat and hearty Children have it for years, without any apparent injury to their health, excepting for a few hours on the fit-day. Our Winters are commonly mild, excepting a few weeks about Christmas, and though we may at other times have severe weather, it seldom continues long. The hard Frosts commence the last of December, and continue without much interruption all  
 January



January and part of February, when there are frequent changes, and often much warm moist weather, from which time I date the beginning of the Spring Complaints. They are commonly Pneumonic or Pleuritic attacks, accompanied with chills, nausea, and bilious vomiting. The pain begins in the side, breast, or shoulder blade, and not unfrequently changes from one side to the other, or darts through from the breast to the shoulder. The chill is of short duration, and succeeded by the Fever, with a pain in the head, back, and large joints. A frequent dry Cough teazes the Patient, and renders the pain more acute, increases with the approach of night, and causes that to be very distressing. The pulse varies from 90 to 120, and at first is generally hard and full. Towards morning the Fever suffers some remission, but by the middle of the day is higher than before. The first attack is attended with bilious vomitings, which exceedingly alarm the sick; but if properly encouraged, relieve the

the stomach, and are seldom dangerous unless when injudiciously treated.

“ OUR most successful Remedies in the Cure of this Complaint, are Bleeding, Blisters, Laxatives, mild Diluents, and gentle Sudorifics. Early in the Disease we take away ten or twelve ounces of Blood, and if the pain is not removed, Cough continues dry, and pulse hard, the same quantity is drawn before the Blister is applied, which is probably the same night or the next morning.

“ THE violence of the Inflammation, age and vigour of the Patient, and the nature of the Epidemic, govern the Lancet, for we frequently have a species of Synochus in the Spring especially after a warm Winter, which requires great caution in Bleeding. I have seen many this year, with acute pains in the Head and short Ribs, when the Pulse was uncommonly low and soft at the commencement of the Disease. In such cases, Blisters to the part  
were

were the only Remedies to be relied on, with Wine and Water for constant drink, and the Bark in quantity, as soon as the pain was removed. An Anodyne at night, after the Inflammation is abated, quiets the Cough, occasions the Patient to rest well, and with an Antimonial, disposes to a free perspiration. Since the Influenza prevailed here, I have learnt to use Opiates more freely in all Complaints attended with a Cough, after the Inflammation is removed, than I had before ventured to do. The contest, which has been so warmly supported by the partizans of Cullen and Brown, must be left to the decision of others ; but I am fully persuaded, that the Doctrines of the latter have tended materially to remove prejudices, and to introduce more liberally into practice, one of the most valuable assistants to the healing Art, though I have more than once witnessed the improper use of it by his pupils ; such has been the case with many valuable Medicines, and it was from Goulard's extravagant recommendations



dations of the Solutions of Lead that we became acquainted with their real virtues.

“ THE Blacks are remarkably subject to inflammatory Complaints from their exposure and deficiency of Cloathing ; and I have observed that they require the use of the Lancet with considerably more freedom than the Whites. They are accustomed to bleed for the most trifling Diseases, and it is often difficult to persuade them of their recovery from any disorder without opening a vein. There are but few even of them, however, that would bear the loss of forty-eight, or fifty-seven ounces, as mentioned by Cleghorn, though our diseases correspond very much with those described by him ; and I conceive, that half the quantity he took away during the first twenty-four hours, with the timely application of Blisters, will conquer most Pneumonic attacks with us, except in very particular constitutions.

“ SOME

“ SOME Cases of Phthisis Pulmonalis occur generally in the Spring, for which I have endeavoured equally to avoid the weakening antiphlogistic, and the highly stimulating mode of treatment. It is unnecessary to give a detail of practice in this Disease; and I shall only observe, that in a few instances, considerable benefit is supposed to have been received from the use of a Swing, as recommended by Dr. Smyth, where the Patients were weak and much reduced, it was suspended in the house, and convenient for use in all weather.

“ As the Spring advances, various eruptive complaints appear, and among the Blacks Scrophulous Swellings inflame and suppurate every year. To palliate the Disease from season to season, and let the Constitution acquire vigour enough to conquer it, and the dangerous period of life has past, which seldom extends beyond twenty-five, is all I ever could accomplish, and in some instances, I have been much perplexed to do that. Of late, the  
internal

internal use of Blue Vitriol has been strongly recommended by a famous empirick, and as I have at present some opportunities of trying it, I shall attend particularly to its administration and effects.

“ THE Cynanche Tonsillaris frequently occurs; for which strong mercurial purges, assisted by Blisters, have succeeded better with me than any other Remedies. The Cynanche Maligna has also prevailed in some parts of the State, but I think it fortunate that it has not been my lot to engage it.

“ THE Measles, last year, added to the list of Epidemics, revived the old dispute respecting the propriety of Bleeding for it; some cases having terminated fatally after profuse Bleeding, it was considered by many as a fatal practice, though I do not recollect my having had cause to repent moderate Bleeding in any instance, while the advantage in many was very apparent; and in some, they left so  
great



great inflammation on the Lungs, that repeated Venæsection was necessary.

“ THE Months of June and July are the most healthy in the year, though they are often as hot, and sometimes more so, than the succeeding. The Weather is then dry, and less liable to change than in August and September, when the rain commences, and sudden variations take place. Intermittents seldom appear till after the tenth of August, and from that period to the same day in October, all Families on the Rivers and Creeks, have it constantly among them. The nocturnal Air at this time is to be cautiously avoided, and the slightest exposure or irregularity, will endanger an attack by a Quotidian or Tertian. We consider Madeira, Port Wine, and Porter, as the best preservatives; and it is certain, that those who make daily use of them in moderation, are not so often sick, and with such assistance, recover soonest. The Fit, on the first evening of the

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attack,

attack, is commonly flight, and sometimes with a Chill and Fever hardly perceptible, and an aching of the Bones, which is taken for Rheumatic. The next Fit comes on earlier in the day with more violent pains in the Joints, succeeded by a Chilliness, as if streams of cold Water were running down the Back ; nor can any Warmth be excited until the reaction of the System takes place. It is a general observation, that the Ague has changed within a few years from violent Shaking to a smart Chill, and though I can remember to have seen the Teeth chatter, it is seldom the case now. As the Fever rises a Glow on the Surface is visible, the Face begins to flush, and with that a Head-ach commences, which increases with the Fever, and continues as long as that lasts. The Pulse, which during the cold Fit is weak and small, rises gradually to fulness and quickness; the Drought is considerable, and the Tongue and Mouth dry and parched. After a few hours a Sweat begins to break out, which gives much relief, and by the Morning

ing carries off the Fever, leaving the Body weak and feeble, the Tongue furred, with loss of Appetite, and a bitter Taste in the Mouth. As the cold Fit goes off, a Vomiting of Bile often takes place, and if properly encouraged, discharges the Morbid Contents of the Stomach, and removes the Sicknefs; for Dr. Moore\* has well observed, that Vomiting is most effectually cured by Vomiting.

“ THE Paroxysms are nearly the same, whether they are Tertians, Quartans, or Quotidians, and the same treatment will generally effect the Cure of each.

“ IF the Head-ach is violent, with a full and strong Pulse, eight or ten ounces of Blood are taken away at the Height of the Fever, and an Emetic, composed of Ipecacuanha and Tartar, is directed to be taken early in the Morning succeeding the Fit, and if it both vomits and purges well, the Bark is administered without delay, so as to get six or eight  
drams

\* Medical Sketches.



drams down before the next period of accession. If it does not stop the next Fit, it so weakens it, that another ounce answers the purpose, and the use of it in smaller quantity for a few days restores health. If the Bark does not prove laxative, a purge should be interposed, to prevent the accumulation of Bile in the *Primæ Viæ*, which will either occasion the Bark to be rejected, or occasion violent pain in the Stomach. In the Cure of Remittents, which are at present more common than formerly, we seldom wait for the Fever to go entirely off; but if the Bowels have been properly evacuated, and a general moisture can be accomplished, I have given the Bark when the Pulse was at 90° or 100°, and have found it to increase the Sweating, and thus have prevented the return of the Fever, which could not so easily have been done, if that Medicine had been delayed: I am, however, fully sensible that there are errors committed, in giving it hastily before the *Primæ Viæ* have been sufficiently cleansed; and I have often seen this done effectually by  
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an Emetic, when repeated Purgatives have failed. I have known Vomiting objected to by Physicians of reputation, as being an unnatural operation ; but this only applies to Health, for a sick Stomach voluntarily relieves itself. Among the lower class of people, with whom the Intermittent often continues twelve or eighteen months, and sometimes for years, Abdominal Congestions, Ulcerated Legs, and Dropsical Swellings, are not unfrequently the consequence. As the following case, which I attended last year, was from this cause, I shall take the liberty of concluding this letter with it, though it may be thought already too long. Having been often disappointed in my expectations from Diuretics, the success which attended the administration of Squills in this instance induced me to record it.

“ ON the 6th of August, I was desired to visit two Girls, about three miles from town, whose Parents lived within half a mile of two  
Mill-

Mill Ponds. They both appeared to be in the last stage of the Dropsy, and one of them died a few days afterwards. The death of the oldest, (perhaps she might be about twelve or thirteen years of age), appeared to be almost as certain, though it might not be so soon : She had been troubled with an Intermittent for nearly two years, which had left her about a month before in a state of great debility. A short time after the Fever ceased, the Swelling of her Abdomen was discovered, and was soon followed by an Anasarca of all the lower parts of her Body, even as high as her Breasts. When I was called in, her Legs were hard, tense, and cracked and ulcerated in several places, so as to make painful sores. Her Breathing was laborious and difficult, and her Coughing almost constant. Her Face was also considerably swelled, and for several nights she had been obliged to sleep in an erect posture. Her Abdomen was greatly distended, and an evident fluctuation of the water within, was to be felt. If she laid down on her side for any time, it left the superior parts,



parts, and all settled in those that were lowest.

“ HER appearance altogether was so unfavourable, that nothing but her youth afforded any prospect of success; and I undertook to administer Medicines more for the satisfaction of the Patient, than from any hopes of my own.

“ AFTER trying several Remedies with little benefit, I was almost persuaded it would be necessary to evacuate the water from her Abdomen by the Trocar; but was afraid, that at such an advanced stage of the Disease, the operation might hasten her exit, instead of preventing it. In this situation I determined make the last effort, with Squills combined with Nitre, and gave it in the following manner :

R/. Scill. rad. ex ficcat. ʒij.

Nitri. ʒj. Syrup. Simp. q. f.

Fiant pilulæ xxx. Cap. tres Mane et Vespere.

She

“ SHE began the use of them on Friday morning, and I did not see her again until Monday, when the good effect from them was surprisngly great. She informed me that she felt herself much better on Saturday, and rested more comfortably that night than she had for many nights before. On Sunday a considerable increase of urine was evident, and the Swelling of her Belly began to subside. On Monday, I found the water almost entirely removed, and her Legs and Thighs so reduced, that she could walk with ease, which before had been very painful. Her appetite was much increased, and she expressed by the joy in her countenance, the relief she had obtained, and the change from misery and despair to ease, and the pleasing, though unexpected prospect of a speedy recovery of Health. The Squill Pills were continued for a few days, which entirely carried off the water, and by the assistance of the Bark, and daily exercise, it was prevented from collecting again, and I heard no more of her complaint.

“ I HAD

“ I HAD forgot to mention, that her Parents were very poor, and in addition to the poverty of her Diet, she had been much exposed in all Weather, during the time of her having the Intermittent. It has been observed by some eminent Physicians, that the Diuretic effects of Squills are not sensible, unless there is some operation in the Stomach from them. Dr. Cullen in his last Edition of his *Materia Medica*, gives his opinion on the subject in the following words :

“ THIS perhaps may be founded ; but I understand it no otherwise than that some operation on the Stomach is a test, and a necessary test, of the Squills being in an active state, in the same manner, as we are only certain of the activity of Mercurial Preparations when they have shewn some effect on the Mouth. In the present instance I attended particularly to their operation on the Stomach, but it was so slight, as not to give any uneasiness. There was a little Nausea

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for



for a short time after taking the morning dose, but so inconsiderable as not to be noticed, until particular enquiries were made on the subject. If their Diuretic effects had not been so sudden, I should have increased the Dose as far as the Stomach would have permitted, but from their neither Vomiting or Purging, they were more powerful Diuretics without weakening the Patient.

“ IN offering this imperfect answer to your Letter, my being unprepared at the time, and unable to pay that attention I could wish, must excuse errors and defects, in which persuasion I have ventured to send it forward.

I am,

Your most obedient,

And very humble Servant,

JAMES LYONS.

HANOVER-TOWN, *May* 13, 1791.

P. S.

“ P. S. THERE is a fact so directly in proof of the pernicious effects of Marsh Miasma, that I must beg leave to mention it; just above Hanover-Town is an extensive piece of low Ground unreclaimed, and it has been long remarked, that the Ague and Fever appear soonest, and are most violent every year, in those families, which occupy the houses nearest to the Marsh, while others, living only a few hundred yards below, seem to escape with considerably less sickness. In so small a town it could hardly be supposed that the difference of situation would be so sensible; but it has been observed so often, that there can be no doubt of the truth of it.

J. L.”

OBSER-

OBSERVATIONS *on the Diseases of the Eastern Parts of Virginia, particularly \*Norfolk and the neighbouring Counties. Communicated by Dr. TAYLOR, and Dr. HANSFORD, of Norfolk, August 10, 1791.*

**I**N the investigation of Endemic Diseases, of their Cause, Progress, and Termination, it would appear, that an enquiry into the state of the Atmosphere at various Periods ; the Situation of Places ; the surrounding Productions of the Earth ; the Rivers, Marshes, Lakes, and even Insects, ought to be added to the account. If the Limits of the Publication, for which these Pages are intended, would permit such an Enquiry, we might easily describe every thing but the Climate, which has been always so irregular, both with respect to Hot and Cold, Wet and Dry Seasons, that were we to recount the Changes which have come immediately under our Observation,  
the

\* Norfolk, the most populous Town in Virginia, contains only about 6000 inhabitants.



the Reader would suppose we were speaking of several Countries situated under different parallels of Latitude. As we cannot enter fully into the subject, we shall only occasionally mention the Seasons and Changes of Weather, when they seem to relate to the subject we are treating of. If we were to attempt to account for the Diseases, and their Varieties, from the Weather we might perhaps mislead the Reader, as well as deceive ourselves ;—for the Science of Medicine is so young in this Country, that we have not the light of former Practitioners to guide us through the dark Labyrinth ; too dark indeed, even where the strongest rays of Human Wisdom are thrown upon it. The Country we speak of is low Land, mostly within twelve feet of the level of the Sea, intersected in all directions with Salt-Creeks and Rivers, the Heads of which form Swamps and Marshes, and Fenny Grounds covered with Water in wet Seasons. Wherever it is not cultivated, the Land is covered with large  
Timber

Timber and thick Underwood. The vicinity of the Sea, and the Salt-Creeks and Rivers, occasion a constant moisture and warmth of the Atmosphere, infomuch, that although under the same Latitude a hundred miles up the Country, deep Snows and frozen Rivers are very common during the Winter, yet here we consider such occurrences as Phenomena ; for these Reasons, the Spring is very early ushered in, sometimes so early, that many Trees are in Bloom about the latter end of February ; from this time, however, till the end of April we are subject to cold Rains, piercing Winds, and sharp Frosts ; it is at this Period only (if we except the Influenza) that any Inflammatory Diseases ever appear among us ; and these are confined to People who live exposed to bleak Winds on the Banks of large Rivers, on the Chesapeake, or on the Sea, or whose Occupations expose them to similar Inconveniences of Situation. We may comprise the whole of the Inflammatory Diseases known here under the Terms Pleurisy and Peripneumony ;—when these  
attack

attack strong Plethoric habits, or healthy strangers from the North, or from the Uplands, we observe nothing uncommon in the appearances of the Disease, neither does the mode of treatment require to be altered from the general Antiphlogistic Plan commonly laid down for the Cure. But when Persons who have long been Residents in this part of the Country are the subjects of Pleurisy or Peripneumony; we have always found the Lancet a very dangerous Remedy, and never use it but with extreme caution;—after the Emetics or Cathartics, we find it much safer to alleviate the painful Symptoms by the use of Opium, joined to powerful Diaphoretics, such as Vin. Antimon. Tart. Emetic, Spt. Minder. Camphor, &c. with Expectorants, occasionally Blisters, partial application of Warm-baths, and if an irritated Stomach (a circumstance we have frequently to contend with in many Diseases) refuses the Opium with Antimonial Preparations or Camphor, we never scruple to use it alone; and however  
extraordinary



extraordinary it may appear to some Practitioners, we never had any cause to suspect it of doing an injury to full and strong habits ; though we confess, with those of the latter description, it does not seem to produce the desired effect so uniformly as we could wish. These Fevers, like almost all others in this Climate, uniformly put on the appearance of an Intermittent after the fifth day, or as soon as the Expectoration is complete ; in many therefore the Bark becomes necessary at the close of the Disease. Inflammatory Diseases are seldom fatal if thus managed, and scarce ever terminate in Phthisis Pulmonalis ; this latter indeed seldom originates here.

“ WE have a Root for which we do not remember any Botanical name, distinguished under the title of Pleurisy Root ; this many of our Country Practitioners assert—to be of great efficacy in Inflammatory Diseases ; and we think it deserves some attention, and frequently use it joined to Seneka in decoction.

Seneca,

Seneka, either with or without the other, produces a gentle Diarrhœa, which manifestly relieves the Patient without checking the Expectoration.

“ ABOUT the middle of May, the Weather becomes fultry, with some cool days, occasioned by the change of Winds to the North and North-East: At this period all the Diseases of the Winter begin to decline, and the whole Country is universally healthy (except here and there a trifling Vernal Intermittent which scarce requires the application of Medicine) till the middle or latter end of June, when Diarrhœas and Dysenteries appear among the Children, mostly with those under two years old, though not absolutely confined to such.

“ IN some years the Diarrhœa is almost universal, attended for the most part with an irritation of the Stomach, and an irregular Fever of the Intermittent kind: After the proper Evacuations, we apply Bark in large

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quantities

quantities, joined to the most approved astringents and Anodynes ; Gum Kino, Opium, Spec. e Scord. &c. and when the Stomach will not bear a sufficient quantity of Bark, we throw it up in Glysters repeatedly, for many days together, and this we have learnt, by experience, to be the only mode which can be depended on.

“ THE Diarrhœa of many of these Children resist every medical effort to cure them ; and these Children gradually decline in Flesh, and contract a Chronic Aphæ, which visibly extends throughout the whole Alimentary Canal.

“ WE have seen the Disease in this State in almost every large town we are acquainted with ;——nor do we know of any certain Cure ; many have recommended the use of Alum, Spec. e. Scord. with the Gum Kino, and have asserted, that great relief has been found therefrom : Others have ventured the use of a Solution of Vitriol. Cærul.



Cærul. but we have never attempted this. It would appear that a Change of Air to a more Northern and cold Climate, or to Places where the use of Chalybeate Waters can be had, would be adviseable; many have recovered by such means, but we have also seen many recover, who were reduced perfectly to Skeletons, without removing at all, or making use of Medicines of any kind.

“ DYSENTERIES in Children are not so difficult to cure ; the common means, such as Ipecacuan. Vit. Cerat. Antimon. Ol. Ricin. Rhubarb. Simaroub. &c. seldom fail to remove the Disease if judiciously administered.

“ AT some Periods we have a Dysentery among the Adults, which may be called Epidemic ; but as this differs in no degree from those which are common to warm Climates, it is entirely unnecessary to say more about it, except that in the cure it does not require those large Evacuations previous

to administering Astringents and Anodynes, which we have seen used by some Practitioners in other Countries, and it will never admit of the Lancet.

“ IN July, the Heat of the Weather increases; but during the whole of this Month and the greatest part of August, there are no Diseases at all, at least none which can be called Epidemic. On the approach of the Autumnal Months, Intermittents begin to appear throughout the Country.

“ IT is not our Province here to recapitulate the several Opinions concerning the Cause and Nature of those Fevers, nor yet to divide them into numberless Species and Genera. We have never been able to distinguish any other difference in the Nature of Intermittents, than that which Constitution, Climate, and Manner of Living give rise to; those Causes will divide them into Perfect, Imperfect, or Remittent: The several Terminations

minations of them which we frequently observe into Continued, Putrid, or Nervous Fevers, will be found to arise from the same Causes, and under those simple terms we shall proceed to treat of Intermittents in all their Stages.

“ THOSE which occur earliest in the Season are uniformly of the mildest kind, and yield soonest to the proper Medicines. Among the Labouring and Temperate Class of our Citizens, whose Diet is simple, whose Hours are regular, and whose use of Spirituous Liquors is sparing, those Fevers are perfect Intermittents, generally of the Tertian kind, and though not confined particularly to any age or sex, yet are most frequent among the younger class, the Females and the Children; they are in wet Seasons almost general among those of the latter description in country places, and in low fenny ground. They yield immediately to proper Evacuations, and the use of the Peruvian Bark, and seldom outlast



outlast the Autumnal Months, even without the assistance of any Art: Sometimes, however, in relaxed Habits, they terminate in Jaundice, enlarged Spleen, Anasarca, and Death. We shall not be particular upon this sort of Intermittents, because they are in nothing different from those which prevail in all countries similarly situated.

“ AMONG that Class of Citizens, whose hours are more irregular, and whose use of Wine and luxurious Food is more frequent, those Fevers, though still retaining the Intermittent, Quotidian, and Tertian Form, are nevertheless imperfectly so; a great degree of Heat, quickness of Pulse, and Debility remain during the whole time, which may be called Intermission, with partial or total Loss of Appetite. Here Intermittents begin to put on an appearance, which we think very different from those of any other Country; they are preceded by a Chilliness, which commonly seizes the Patient when he thinks himself

himself in perfect Health. Head-ach, great Thirst and Heat soon follow, in many instances Delirium, Vomiting, Diarrhoea, and large Discharges of Bile;—about the fifth, seventh, or twelfth hour the Patient is relieved by profuse Sweat, which continues with the aforementioned Heat, Quickness of Pulse, and Debility, till the next Paroxysm. These are generally of the Tertian kind, and return regularly if no Medicine is used, from nine to fourteen days, when they will commonly terminate altogether, or degenerate into a slight Quotidian, which allows the Patient to walk about, and when the cold Weather approaches for the most part leave him altogether.

“ PEOPLE of the latter description are more rarely the subjects of Intermittent Fevers than those who live in a plain manner; and if proper Evacuations are made, and the Bark administered with perseverance, and attention to the Stomach and first Passages, the  
Disease

Disease may almost certainly be cured after the third Paroxysm, and very often even a second is prevented.

“ WE have always experienced Cathartics to be the safest and most effectual Evacuations in those kinds of Fevers ; and if the Patient has an irritated Stomach with Costiveness, Emetics are not only inadequate and unnecessary but dangerous. We frequently find great difficulty in making the Stomach bear a sufficient quantity of Cathartic Medicines to procure the desired Evacuations: when this is the case, Laudanum and Aqua Menthæ, or Extract. Thebaic. are administered an hour or two before the Purge, which generally causes the latter to remain, and though the Opiate retards the operation, it does not ultimately prevent it, or render it less powerful. After this we proceed to the use of the Bark during the Intermissions, and without regard to measure, give it as profusely as the Stomach will permit, and in the most powerful form



form, beginning with the Powder, and occasionally using the Decoction, the Extract, and cold Infusion. It too often happens, that the Stomach will not bear the Medicine at all, in which case we give large quantities of the Decoction or Infusion by Clysters; and we can venture to assert, when those Clysters are retained in sufficient Quantity, the effect is equal to that produced by any other mode of administering it. During the Paroxysm, we find great Relief procured, by making the Patient drink plentifully of a strong Infusion of Serpent. Virgin. to which, when the Symptoms are very painful, we add Laudanum in sufficient quantity to procure the Patient perfect ease. These last Medicines, particularly the Serpent. have a visible power of shortening the Paroxysm, and will rarely disagree with the Stomach. The use of Opium, its safety and advantage in those cases, we presume to be well known; therefore we shall decline making any Observations upon it, except that we have not found it (as has been asserted) capable *per se*, of curing

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Intermittents.

Intermittents. It has been advised to give it in conjunction with the several Preparations of Bark, where the irritable state of the Stomach will not bear the Cort. alone. This expedient will succeed, if the quantity from time to time be increased, and is often used with success, though it invariably occasions great distress to the Patient when the Fever leaves him, by inducing an Hysterical or Hypochondriacal sensation, which if it does not amount to pain, the Patient will tell you his feelings are far worse than if it did.

“ THE use of this Medicine to prevent the passage of the Bark by stool is known to every one; but we think the Gum. Kino for general use much better, and more permanent in its effects.

“ AT the accession of those Fevers there is frequently a full hard Pulse, inflamed Eyes, a sense of fullness in the Breast, and sometimes a sharp Pain in the Side, resembling  
that

that which attends inflammatory Fevers. These circumstances have often led Practitioners, and others who are unacquainted with the Climate, to bleed the Patient; an expedient, which if it does not produce a tendency to Putrefaction, invariably fixes the Fever so firmly, that the Cure becomes afterwards exceedingly difficult.

“ WHEN no Medicines are given at all, we have observed before, that the Fever for the most part will decline of itself on the ninth or fourteenth day, or degenerate into a slight Quotidian, and sometimes a Quartan; this is, however, not always the case.

“ IF no Medicine has been given, or if the Disease has been improperly treated by Bleeding, or by too great Evacuations, otherwise by forbidding the use of Wine, &c. the Fever sometimes becomes Remittent.

“ IN the town we have also many of these  
Fever,



Fevers, which though clearly belonging to the Class of Intermittents, are Aborigine Remittents ; because, there is an evident tendency to decline of the Fever at a particular time, once in twenty-four hours, every other day, or every fourth day, and all the Diagnostic Symptoms are precisely the same as they are in a distinct Intermittent, making allowance for Age, Sex, and Constitution ; nor do the means of Cure differ, though variously applied.

“ THAT Species of Remittent which arises from neglect, or improper treatment of Intermittents (except that Evacuations should be cautiously repeated) may be treated in the same manner with those we are about to describe.

“ IN the Town, throughout the Months of September and October, many of the Inhabitants are seized with Fevers, which begin by Chilliness, a sense of fulness in the  
Stomach,

Stomach, followed by Pains throughout the Limbs, Neck, Back, and Hips, great Heat and prostration of Strength, which proceed and terminate as before described, under the Term of imperfect Intermittents. But others who are attacked in the same manner, particularly Robust and Plethoric Habits, or those who are accustomed to drink a great deal of Wine, Porter, &c. and take plentifully of luxurious Food, have a greater sense of Heat, more Pain in the Limbs, and much more Oppression and Debility—are extremely restless, sometimes with Delirium, and great Thirst; and when the Period of Intermission of the Fever should arrive, viz. the ninth or twelfth hour, are but partially relieved, that is, the sense of Heat is not so great, the Delirium and Restlessness are somewhat abated, and there are some few strokes difference in the Pulse; and when there is Nausea and Vomiting, those likewise partly cease to torment the Patient, but the prostration of Strength, Pain in the Limbs, &c. with the  
dry

dry Skin, still remain : Here the Evacuation by Cathartics should be attempted without delay, and the Period of the Remission (which though obscure, lasts several hours) employed in administering Bark in every possible form, without regard to the Quickness of Pulse and dry Skin ; Wine should be given in large quantities, and on the return of the Paroxysm, the Patient should drink profusely of an Infusion of Serpentaria. with Wine.

“ WHEN this Plan is followed with perseverance, the Patient almost always recovers, though the Paroxysm, or properly speaking, the violent hours of the Fever, may return once or twice ; but if this is neglected, after the second return, the Fever puts on a malignant and putrid Type, and often ends in Death.

“ WE have sometimes found it impracticable to make the Patient keep the Bark  
in



in any form, or by any mode of giving it ; when this is the case, the Disease is always dangerous, and the only Expedient we have left is the use of Wine and Serpentar. and we have so many times experienced the advantage of this last Medicine, by giving it in large quantity, that we cannot help earnestly recommending it to the notice of every Practitioner.

“ IT is a Medicine, though of known efficacy, very much neglected, at least the proper administration of it ; like the Bark, it cannot be given in too large a quantity, when the Stomach will bear it. The Fevers of the latter description are less common than the others.

“ WHEN the Disease begins to yield to the Medicine, a profuse Sweat comes on ; the Pulse grows full, slow, and soft ; the sense of Heat and Pain in the Limbs, Back, Hips, and Neck abate and gradually subside ; the Patient

tient has a desire to eat, and in a few day he feels nothing but a Debility, which is far from being so great as the violence of the Disease would give cause to suspect, and a very little time restores him to perfect health and vigour.

“ WHEN it is about to terminate unfavourably, there is an increased irritation of the Stomach, with vomiting of Cyelic Bile, mixed with tough Mucus, attended in some cases with Diarrhœa; the Pulse grows smaller, quicker, and intermits, or rather seems at times to retreat from the Finger while feeling it; the Countenance falls, the Eyes become glossy, the Tongue black and dry, the Teeth cemented over with a black mucilaginous substance, cold Extremities, and Death; the Pulse, however, is never to be depended upon in the termination of those Fevers; it is sometimes so hard, full, and regular, even at the moment that every other Symptom evinces the approach of Death, that inexperienced Practitioners

Practitioners would be often induced to bleed or evacuate when the Patient is expiring.

“ WHEN continued Fevers from Intermittents take place, they are generally confined to relaxed, debilitated, or young habits ; they are far from being common with us, and as in every other Country, they either terminate on the twenty-first and thirty-first day, or lengthen out into what are called Nervous Fevers, we shall neither treat of this stage of the Disorder, or pretend to point out a mode of cure, for what ever may be the predisposing Cause, the Disease is invariably the same, and requires the same mode of treatment in every country. We must, however, take notice of one effect which some Intermittents produce, viz. A Debility or Affection of the Optic Nerve, so as to render the Patient perfectly blind, till the Bark and other Tonics, have removed the Fever, when those Patients recover their Sight with Health.



“ IN the Autumn of Eighty-nine, the Influenza made its appearance here, as it did throughout the Continent a little before and after that time, We should not have taken notice of this Disease, which has been at times common to various parts of the World, if we had not observed something singular in its progress through this Part of the Country.

“ DURING the whole month of August in that year, the Weather was remarkably cool and pleasant, with the Wind from the North-West to the North-East, and continued so with some little intervals of South Winds and moderate Heat till the last of September, when the Influenza began to appear, and from the time these Winds sprung up we had no Intermittents as in former and succeeding years.

“ THE Influenza though universal, scarce one in a thousand escaping it, was mild, and attended with a slight Fever, only some few instances excepted where Pleurisy and Peripneumony

neumony took place : two or three only of those Died, more, we believe, from improper management than from the Malignity of the Disease itself, most of those to whom it had proved fatal being profusely bled and evacuated. We only recollect one instance of any person, who, in consequence of this Disease, afterwards died with Phthisis Pulmonalis ; a circumstance which has frequently happened in other parts of Virginia and to the North. Notwithstanding this Epidemic was visibly of an inflammatory kind, it would not, with us, admit of what is called the antiphlogistic plan ; and we are authorized to say this, because in pursuing a middle way, that is, by moderate evacuations and Diaphoretics without bleeding, and afterwards a free use of the Bark, we have lost none of those Patients whom we had the management of from the beginning. An inflammatory Disorder similar to this, and by some called by the same name, again appeared, beginning in the Winter 1790. This was generally attended with Symptoms of Inflammation considerably worse than what we have been accustomed to

to call the original Influenza, nevertheless, we could not find upon trial that any advantage was derived from the Lincet. This complaint was much more fatal than the former, and often resisted every application for relief. In the latter end of the Winter 1784, we had a species of Malignant Angina which was Epidemic and contagious ; and although we have never experienced any thing similar to it since, or any tradition of its having happened in this Country, yet we think we have both seen and read of the same Disease elsewhere. If the manner in which we have in several places recommended the use of the Bark should appear extraordinary, we have only to beg the Reader to rely upon our words for the success of such Practice, which we assure him a very long course of Experience taught us not only to be beneficial, but absolutely free from danger in our Climate at least. We have had reason to think (tho' we will not venture to give it as a positive fact), that the Peruvian Bark is considerably less active in the Cure of Intermittents, in Constitutions which have been long accustomed



tomed to the free use of Wine, ardent Spirits, and luxurious food; even where such Constitutions have not been visibly Impaired, or Debilitated by such habits. If this be true, Wine and ardent Spirits, as has been observed by many Practitioners, possess a considerable share of the Specific virtues of Bark. This last, we have pretty well ascertained, will not prevent what it will Cure; that is, the constant use of it will not preserve a Person from the attack of an Intermittent, though it will afterwards remove it, but must be taken in much larger Quantities than would have been necessary if the Habit had not been before accustomed to it; and if Wine and ardent Spirits possess any of its Specific Virtues, the habitual application of those to the Constitution may lessen the power of the Bark, in the same manner as if itself had been constantly taken. We offer this as a mere matter of opinion, which cannot be thought extraordinary, if we may reason from Analogy and compare the action of Opium, and many other Medicines, which gradually lose their power by repeated application.

A SKETCH *of the* SITUATION,  
CLIMATE, *and* DISEASES *of*  
NORTH-CAROLINA.

“ **T**HIS State, (bounded North by Virginia, East by the Atlantic Ocean ; South by South-Carolina and Georgia ; and West by the Mississipi,) is situated between the  $34^{\circ}$  and  $36^{\circ} 30'$  North Latitude. It is 758 Miles in length, and about 110 in breadth

It is plentifully supplied with Rivers, Bays, Inlets, Morasses and Swamps ; it is but thinly settled, and indifferently cultivated in proportion to its extent. There is one Swamp in this State, called the Dismal Swamp, which extends over a large tract of Country, between Pamlico and Albemarle Sounds ; and another North of Edentown, which

which lies partly in this State and partly in Virginia. This last tract of Swamp or Marsh Ground contains upwards of 140,000 Acres.

“NEWBERN, the largest Town in this State, contains only about 400 houses, all built of Wood; and stands on a flat Sandy point of Land formed by the Confluence of the Rivers Neus and Trent.

“NORTH-CAROLINA, in its whole breadth for the extent of 60 Miles from the Sea, is a dead level. A great proportion of this tract is a barren Forest. On the Banks of some of the Rivers, the land is fertile and good. Interspersed through the other parts, are glades of rich Swamp, and ridges of Oakland of a black fertile Soil. The Sea Coast, the Sounds, Inlets, and lower parts of the Rivers, have uniformly a muddy soft bottom.

“About 80 or 90 Miles to the Westward of the Atlantic, this State begins to swell in-  
to



to Hills which increase in size, and are more mixed with stones, also of increased magnitude the farther we proceed in that direction. The Soil in these parts is of reddish Clay and Loam, strong and fertile; the Woods less intermingled with Pines and more with Oak and Hickory; and the Water is every where excellent, running in a profusion of clear and refreshing streams.

“ THE Country and Climate to the Westward is in general healthy, the low Grounds along the Rivers alone being otherwise, particularly those of the Roanoak, occasioned by exhalations arising from the damp Soil, stagnated Waters, and by the putrescent particles with which the Atmosphere is replete, whose free circulation and purification is prevented in such situations, by lofty thick Woods, impervious to the Sun's rays, under which a dismal Gloom for ever dwells.

“ IN such situations we find Intermittents and Remittents, the principal Endemial Diseases

eases of this State, infomuch that even in the Winter Season we find that most of the Complaints which begin with Inflammatory Symptoms, are changed in the course of a few days into one or other of these.

“ THE Winters of this State, are more pleasant and agreeable than can well be conceived ; they are neither so Hot as to incommode, nor so Cold as to be disagreeable. And for the most part, the Weather is Clear, Bright, and Serene ; and the Ground (where fertile) is covered with delightful verdure. For here all the Inclemency of the Weather is in the Summer. At this Season, the intense Heat and the scorching rays of the Sun are almost intolerable ; and multitudes of troublesome Flies, Muskittoes, and other Insects and Reptiles, continually infest and prey upon every Living Creature in the Fields and Woods, sucking their Blood, and giving continual torment both Day and Night ; so that every kind of Beast becomes miserably Lean and Weak, while this Season lasts. Even to

T t

Man,

Man, with all his resources and advantages, the Heat then becomes intolerable, nor can he find any shelter or defence against the assaults of these tormenting Insects, and venomous Reptiles, which infest the Air and Earth.

“ BOTH Rice and Indigo are cultivated on the low wet Grounds ; these increase the unwholesomeness of the Air, because the Quantity of Water which they require for their support becomes stagnant in many places. The Indigo requires a great deal of Water in its Manufacture, and soon becomes putrid in this sultry Climate ; in this condition it becomes extremely offensive and insalubrious ; the rotten Indigo plant is often hawled out, and spread over the Fields to manure the Grounds, and becomes abominably noisome, rendering the Atmosphere for some distance absolutely deleterious, and frequently almost pestilential.

DURING



“ DURING the latter part of Summer and the beginning of Autumn, putrid and noxious effluvia rise in very gross and thick vapours from the valleys, from stagnant and shallow pools, or fens, especially after heavy showers, and the lasting and excessive heats which succeeds such rains.

“ THE dews are likewise near the sea-coast very copious in the beginning of Autumn, in a still evening and in the night, and the whole country is covered with a thick fog till after seven o'clock in the morning.

“ ALONG the Sea coast, the East Winds are the coolest in Summer, and the warmest in Winter.” (Winds have a demonstrable influence on the temperature of the Atmosphere; and since these must, like all the other phenomena of nature, be governed by fixed and determinate laws, they deserve investigation.) Unusual cold happens either in the Summer or in the Winter season; the circumstances

cumstances which render Summers less warm than usual are pretty obvious ; for the diminution of heat may arise either from a long continuance of Easterly or Northerly Winds, or from frequent and heavy Rains, which are followed by great evaporation ; or from a long continuance of cloudy weather which intercepts the Sun's rays, and prevents the Earth from absorbing them.

THE causes of unusual cold in Winter, in this Climate, are of more difficult investigation. Those best ascertained, are, 1st. Unusual cold in the preceding Summer: For, as the Winter's heat is in a great measure derived from the Earth, if this be deprived of its usual store of heat, the want of it must be perceived the ensuing Winter. 2d. Heavy Rains, followed by Westerly or Northerly winds ; this is owing to the powerful evaporation promoted by these dry Winds.

DISEASES.

## D I S E A S E S.

THE Climate of this State so nearly resembles that of South-Carolina, that I shall omit giving any farther description of it here, and shall only enumerate such Diseases as are most prevalent. Dr. Smith informs me, that, “ East of the Mountains, a spurious kind of Pleurisy, accompanied with profuse expectoration of a thin gleety Mucus, is the most prevalent complaint in the Winter and Spring seasons ; the Pulse, in this Disease, is more frequent, but never so hard, full, or strong as in the true Pleurisy ; the inflammatory symptoms are observed to subside much earlier, and are very apt to be succeeded by symptoms resembling those of the Typhus, or rather of the Remitting Fever.

“ MODERATE bleeding, at the commencement of the Fever, is generally of service, but a repetition is seldom found salutary ;  
and



and copious bleeding has invariably occasioned such a state of debility in a number of cases in which I have employed it, misled by fervilely copying the practice of Sydenham, and the Lectures of a celebrated foreign Professor, that I am now always moderate in the quantity I direct to be taken away." But mild Emetics, and especially nauseating doses of Antimonials with moderate purging, and the early application of Blisters to the Thorax, or back, are the remedies which I have found most generally beneficial.

" I HAVE also given Opium, combined with a little Tartar Emetic, or Antimonial Wine, with great apparent good effect at bedtime, as soon as the Phlogistic Diathesis had considerably abated.

" THESE kind of Pleurifies are commonly brought on by intemperance and imprudent exposure to the Weather, which is very fluctuating

tuating during the Winter, and especially towards the approach of Spring. Were the Inhabitants more cautious and attentive to these circumstances, they might in general escape the danger of this Disease. I have found the use of Flannel next to the skin an excellent prophylactic against the Diseases of the Winter and Spring season. I believe the Western and Hilly parts of this State are as healthful as any part of the world, and I am sure they are as pleasant in respect to Weather—But in the flat Country, in many parts of which there are whole Lakes of Stagnant Water constantly in a state of putrefaction, the inhabitants are sadly afflicted with Disease; particularly with Intermittent and Remittent Fevers, frequently accompanied with very extraordinary symptoms of debility, and bilious discharges, and often with Coma resembling the Apoplexy. Our principal remedies for these are Bark, Snake-root, and ardent Spirits diluted with water; and notwithstanding the many Satires which have of late been written against Rum, I

I think

think it has been the falvation of multitudes in this Climate; an infufion of Calamus, Aromaticus, Snakeroot, and the bark of our live Oak is a Catholicon for the Ague among our Rice Planters.

“ THE countenances of the generality of the natives of this part of the State where I refide are pale and fallow. This appears to be occafioned by the exceffive fecretion of Bile, peculiar to warm Climates, and to Agueifh diforders.”

“ IN the language of Armftrong, I may truly fay—

“ Here on a ruftic throne of dewy turf,  
With baneful fogs her aching temples bound,  
Prefides Quotidiana; a fluggifh Fiend,  
Begot by Eurus, when by brutal force  
He embrac’d the fickly Naiad of the Fens.  
From fuch a mixture fprung, this fitful peft,  
With feverifh blafis fubdues the fick’ning land;  
Cold tremors come, with mighty love of reft,  
Convulfive yawnings, lalfitude and pains,

That



That sting the burden'd brows, fatigue the loins,  
 And rack the joints, and every torpid limb;  
 Then parching heat succeeds, till copious sweats  
 O'erflow : A short relief from former ills.  
 Beneath repeated shocks the wretches pine,  
 The vigour sinks, the habit melts away,  
 The chearful, pure and animated bloom  
 Dies from the face, with squalid Atrophy  
 Devour'd, in fallow melancholy clad;  
 And oft the Sorceress, in her fated wrath,  
 Religns them to the Furies of her train,  
 The bloated Hydrops, and the yellow Fiend,  
 Ting'd with her own accumulated gall."

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EXTRACT *of a* LETTER *from* Dr. JOSEPH MILLER, dated Washington, on Tar River, August 17th, 1791.

" CHILDREN are astonishingly subject to Worms in all the Towns in the low Country, and as far as I can learn in every Town to the Southward—The Hydrocephalus also occurs more frequently than is commonly supposed. I have never had an opportunity of opening any person who died of this Disease ;

case ; but from the best accounts which have been recorded, I am convinced that multitudes of those who are thought to die of Worm Fevers, die of the Hydrocephalus. I am so fully persuaded of this, that I make it a rule always to compare the Diagnostic Symptoms of the one with those of the other before I attempt to prescribe ; but as there are some Symptoms common to both, I am often at a loss—When the Patient has a dilatation of the pupil and convulsive motion of the Eye-lids, and squinting without an affection of the limbs, or frothing at the mouth, there can be little doubt that the Disease depends upon effusion or collection of Water within the Ventricles of the Brain ; and more especially when the Patient often puts his hand to the head and shrieks out, or complains of pain there. But as the Patient grinds his teeth, shrieks out, and has a very irregular Fever in consequence of the irritation occasioned by Worms, especially when previously reduced by debilitating causes, I think it is a very difficult point to distinguish one Disease from the other.

THE

“ THE cases of Hydrocephalus which I have taken particular notice of, began like irregular Remittents, and generally continued a Week or more before any Comatose Symptoms, Dilatations of the Pupils, Strabismus, or Spasms, came on ; and before the decease of the Patient, a Paralysis of one side uniformly took place : The Stomach and Bowels also seemed to lose their sensibility early in the complaint, which is seldom or never the case from Worms.

“ As I have been unlucky in my prescriptions and treatment of the Hydrocephalus, I will not trouble you with a detail of particulars; but whenever I have been able to ascertain the presence of Worms, I have seldom failed removing them, by exhibiting a draught of a strong infusion of the Anthelmia, or Caryophyllum Indicum, night and morning for three or four days, and afterwards a dose of Mercurius Dulcis and Rubarb, proportionate to the Patients age. If any signs of Worms still remain, the same remedy ought to be repeated



peated after an interval of three or four days. The success of this method is almost incredible—I have never yet seen an instance where it was not effectual, whether the Patient had a Fever or not, when the principal Symptoms were manifestly occasioned by Worms. I generally direct One Drachm of the Roots, Stalks and Leaves to be infused four hours in half a pint of Boiling Water, and as much of it to be given with the addition of a little Milk and Sugar, as the Patient has been accustomed to take of Tea or Coffee for Breakfast and Supper. The day the Mercurial purge is taken, the Patient is prohibited cold drinks and solid Food. To confirm the cure, Huxham's Tincture is directed to be taken before Dinner, and a little Wine and Water made use of for common drink.

“ I HAVE tried Blisters frequently to the Occiput, Neck, and behind the Ears, in several cases of Hydrocephalus, and in every stage, and have raised a moderate Ptyalism, by the application of Mercurial Ointment to the  
body

body without success; and yet I have no doubt of that method, with the addition of a Cordial Regimen, and the frequent application of hot Pediluvium, being the only one which has any probability of ever being of real service. This opinion I ground on the success of others, as well as on the Pathology."

A SKETCH *of the* SITUATION,  
CLIMATE, *and* DISEASES *of*  
SOUTH-CAROLINA.

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[*Extract of a Letter from the Honorable DAVID RAM-  
SAY, Esq. dated Charleston, March 17, 1791.*

*“ I HAVE not leisure sufficient to do justice to the subject you request, but this will be no disappointment as more has been written towards elucidating the Medical History of South-Carolina, than of almost any other State. I refer particularly to Dr. Lining’s and Dr. Chalmer’s Publications. I think the latter has exaggerated the heat of our Climate, and given a Gloomy representation of its Diseases, but that his Writings afford good Materials for your Work.”]*

THIS State is in length about 200 miles,  
and in breadth 125, situate between  
32 and 35 degrees of North Latitude.

“ BOUNDED East by the Atlantic Ocean,  
North, by North-Carolina, Southwest and  
South



South, by Savannah River, which divides it from Georgia.

“ THE coast of this Country is so low and flat, that it cannot be seen at the distance of more than Seven Leagues, but about 60 miles from the Shore, the land becomes more unequal, and consists of Spacious levels, interspersed with easy risings, which gradually advancing in height towards the West, terminate in a range of Lofty Mountains, that form, as it were, a chain which runs throughout the Continent of North-America, at the distance of about 300 Miles from the Sea-Coast.”

FROM the East sides of these Mountains, many Rivers arise; and as all the Waters of the adjacent Lands fall into them, these Rivers are liable to excessive inundations; swelling sometimes more than 20 feet in height in the space of 12 hours, particularly in those places where the Channels are narrow, and the Banks sufficiently high to confine the  
Waters.

Waters. But where the Land is lower, the Waters overflow and spread themselves many miles beyond their ordinary limits; and thus the low lands often continue deluged for many weeks.

THESE land-floods are owing either to the melting of Snow on the Mountains, or the falling of heavy Rains in the interior parts of the Country, and they sometimes happen both in the Spring and Autumn, but most frequently in the latter Season. Some years, however, (though these are rare) the Rivers do not swell at all, or in so small a degree as not to occasion any damage.

WHEN such inundations happen in the Spring, the Planters can not sow their grain; and in Autumn the produce of their lands is either swept away by the Stream, or so rotted, that little or nothing can be reaped for that year: However so prolific are those lands, that if one Crop is lost out of three, the Planters are sufficiently recompensed.

A great

“ A GREAT part of the Rice Plantations are occasionally overflowed by art, for the purpose of promoting the growth of the Rice, which is properly a Water-plant, at least when of a proper age it thrives best in Water. This has a salutary effect, as it prevents the generation of putrid exhalations, the effect of stagnant, confined, and motionless waters when operated on by heat. In order to prepare such Lands, Dams, Banks and Drains are necessary.

“ THREE days before, and as many after every change and full of the Moon, the Sea flowing in with a stronger Current, and rising some feet higher in the Rivers, so far as the tide flows, checks the course of the Water in them, and causes them to swell and overflow the Low Lands above.

“ ALONG the Banks of every River lies much Low Land, which is mostly covered at High-Water so far as the Tide flows. As far as the Sea Water flows these Banks are

X x

covered



covered with an high and strong sedgey sort of Grass, like Wild Oats—and at a greater distance from the Sea, where the Waters are always Fresh, such Swampy Grounds abound with Coarse Grass, Reeds, and a vast variety of other productions, from the lofty Cypress to the humblest and most diminutive Plant. Besides these wet Lands, there are several Fresh Water Lakes in the interior parts of the Country, and great quantities of low level Ground, which after Heavy Rains, continue long overflowed for want of declivities by which the Waters might run off. When these Stagnant Waters are nearly or quite expended, noxious exhalations will abound; for then the Sun's Rays penetrating the Miry Soil, the corrupt, putrid and mephitic Matter which had lien quiescent is thereby set at liberty, and mixes with the Air we breathe. The Soil of this State is very various, being generally light and sandy within 20 miles of the Sea. This refers only to the more elevated parts, for in many other places the Mould is rich and deep.

“ THE quantity of Water which constantly Stagnates in various parts, occasions innumerable multitudes of Reptiles and Insects that are intollerably troublesome to the Inhabitants, more especially at night, unless they are guarded against by Gauze Curtains, or some other contrivance.

“ EXCEPT in one River, a stone larger than a pebble is not to be found any where within 20 miles of the Sea, exclusive of what has been brought in as Ballast for Ships.

“ WHEN the English first took possession of this Country, excepting Savannahs, (which are Plains naturally without Trees) and some small openings made by the Savages, the whole was one continued Forest; and perhaps one 20th part of it is not yet cleared and cultivated. (Since the above account was published by Dr. Chalmers, which was about the year 1772, a much greater portion of this State has been cleared, and a considerable

able part of it is now (in 1791) in the highest cultivation.)

“ FROM the surfaces, therefore, of so many large Rivers, and numerous collections of standing Waters, such quantities of stunk, fenny, and marshy Lands, and the vast Atlantic Ocean that borders on our Coast, it may readily be inferred, that excessive exhalations must be made in this Sultry Climate; to which may be added, the exuberant transpiration from the Soil, and of perspiration from Vegetable productions which every where cover the Ground.

“ THE extraordinary Moisture of this Climate is manifest from the quantity of Rain which falls at Charlestown, in the course of the year—This, at a medium for ten years, viz. from 1750 to 1760, was 42 inches annually, exclusive of the Moisture that descended in Fogs and Dews.

“ DEWS that are heavy shew an Atmosphere



phere replete with Moisture: These are so great here in common Seasons, that those who are abroad at night, are presently wet and chilled by them—The Fogs are sometimes so great in Winter as to obscure the Sun for several days together.

“ DURING this damp Weather, Water may be seen pouring down Looking-Glasses, and whatever is painted: Candles burn dimly, the flames appearing as if surrounded with *Halos*; Marshy Grounds, Ditches, Sinks, and Shallow Standing Waters, emit an offensive Smell; and all things are rendered so Damp within doors where no Fires are kept, that on entering a House a musty disagreeable smell is perceived, like that of the Chambers of those who are sweating in Fevers.

“ As we have no Hills nor Mountains near us to collect or to conduct the Currents of Air, the Wind seldom blows with much force, except in time of a Hurricane, which  
happens



happens but seldom, and at no stated periods ; nor does such an outrageous Storm arise at all, unless the Winds have been small and the Weather very Hot and Dry for a considerable time before : Hence it should seem, that the Air at last becomes so rarified as to permit the contiguous Denser Atmosphere to rush towards ours with great velocity as into an exhausted Receiver, in order to restore the Equilibrium.

“ ON these occasions the Storm always proceeds from the Northeast ; this being the opposite point to that from whence the Wind had blown so long before.

“ NOTWITHSTANDING the damages sustained by Individuals on such occasions, the want of such tempests for many years together is probably a great misfortune to us ; because the Air does not receive sufficient Ventilation to be conducive to Health by any other means in this Climate : But till the Land is more cleared our Atmosphere cannot

not be wholly renewed even by a Hurricane ; because the Wind cannot penetrate such an extent of close Woods, which are even impervious to the Sun's Rays, and where the Air contracts a mephitic quality by close confinement, and the impregnation of the fixed Air, after it has been set at liberty by the putrefaction of decaying Vegetables, &c. It is therefore probable that the generality of the Land Winds rather tend to vitiate than to purify the Air with which they come in contact, and that the Winds which come from the Sea are the only ones that purify it at present.

“ OUR Air is liable to as sudden and great changes in its temperature as can possibly happen in any Country ; but fortunately the greatest variations are from Warm and Moist, to Cold and Clear Weather. These extraordinary vicissitudes are most frequent in *Winter* and *Spring* ; though in *Autumn* the difference between the Heat of the Day and Night often exceeds 20 Degrees.

FROM

“ From the comparatively greater coolness and Moisture of the Air at Night it probably is, that when the Weather is Calm, during the Autumn, and even later, the whole Country will be covered with a thick Fog. For as the Earth retains the Heat it received from the Sun in the Day longer than the Atmosphere does, it still emits Vapours, which cannot ascend to any considerable height, because of the Colder Air above; and as the humidity that was before diffused aloft, is then made to coalesce and fall lower, by its gravity being thus augmented, they together form those Dense Clouds which hang, as it were, balanced between the Cooler Medium above and the Warmer one below. But as the Heat of the Soil abates more the longer the Sun has been absent, these Clouds descend still lower, till they cover the face of the Earth in such a manner, that in the Morning the largest objects are intercepted from our view sometimes at the distance of 20 yards: But even then, should we look out of a Window up two pair of Stairs,



Stairs, though the Gound below us can not be seen, the Air is perfectly serene at that height. The surrounding higher prospects then appear Romantic, and the whole looks like Enchantment. For as only the tops of the Trees and Houses can be seen, they seem to grow and stand, as it were, in the middle of a Great Ocean, which the Fog resembles.

“ THIS scene will continue till the Vapours are exhaled by the Sun, or dissipated by the Wind, which commonly happens by 10 o’Clock, A. M. or earlier, and the whole will be dispersed before noon, unless the Weather continues quite calm.

“ LIGHTNING and Thunder happen at all Seasons when it Rains immediately after a shift of Wind ; but from April to September we seldom have a Shower without both, though they are generally most dreadful in June, July, and August.

Y y

I CANNOT



“ I CAN not convey a better idea of the Heat we perceive in passing along the Streets at Noon in the Summer than by comparing it to that glow which strikes one who looks into a pretty warm oven ; for it is so increased by reflection from the houses and Sandy Streets as sometimes to raise the Mercury to the 130th degree on Farenheit's Thermometer, when the temperature of the shaded Air may not exceed the 94th.

“ THE sudden Death and excessive putrefaction of a Dog which was shut up in a Sugar Baker's Stove, where the Mercury rose to the 146th Degree, led Dr. Boerhaave into some mistakes with respect to the effects of Heat on living Animals, which almost every year are contradicted by experience in this Climate. The Creature which was the subject of this experiment, did not die of Heat alone, but rather of the rarity of the Air, and the mephitical qualities it contracted in the Stove for want of the admission of fresh Air.

FOR

FOR we are assured, that on several occasions a still greater degree of heat is sustained by Mankind, and for a longer time together  
 \* without any immediate danger to life.

FEW

\* Dr. Zimmerman in his Geographical History of Man, informs us, that “ Man, and Man alone, is formed to resist the two extremes of Heat and Cold, and that he lives and continues healthy under all the variations of temperature, from the 232 of natural Cold, to the 130th Degree of natural Heat.”

SEE also the account of Dr. George Fordyce’s Experiments in Duncan’s Commentaries; and the account of the Climate of Russia by Dr. Guthrie, in the Royal Transactions of Edinburgh, Vol. 2d.

“ IN Siberia, A. D. 1772, the Cold was so extreme on the 7th of December, that the Mercury sunk to  $80^{\circ}$  below 0, and some days afterwards it froze in the Ball, which according to the best experiments requires  $370^{\circ}$  below 0, to be completely congealed.”

ON Churchill’s River, in Hudson’s-Bay, Brandy could not be preserved from freezing in the closest rooms. In Senegal, which is situated in 17 Degrees N. L. the Mercury rose to  $108\frac{1}{2}^{\circ}$  in the Shade, and near the Coast, to  $117\frac{1}{2}^{\circ}$ . The Negroes often sustain a Heat of  $120^{\circ}$ .

Dr. BLAGDEN resisted the Heat when raised to  $48^{\circ}$  above that of Boiling Water for the space of 8 minutes.

DUHAMEL and TILLET give an account of some French Girls who supported a Heat of  $175^{\circ}$  in an Oven without any injurious effects for more than ten minutes.

“ FEW days pass throughout the year in which we do not see the Sun, and the Weather for the most part is so moderate in the Winter Season, that Candles burn steadily in the open Balconies on nights of public rejoicing.

“ IT seldom freezes more than four or five times in the above Season; but then a thaw so soon succeeds, that in the space of Ten Years the ice may not be strong enough to bear a Man's weight. It is unusual to see the Ground covered with Snow; and when this does happen, it seldom lies more than 24 hours.

“ HOAR Frosts are, however, frequent in Winter, and Hail with the Summer Showers, as *Halos* are at all seasons.

“ THE lowest station of the Thermometer for the last 10 years has been 18, and the highest 101.

THE

“THE difference in the range of the Barometer, for the space of 15 years, was not more than 1.22 Inches. Very warm Air, or the flame of a Candle held near the tube, will cause the Mercury to rise in the Barometer, and East or Northerly Winds do the same, but it subsides with a South or West Wind.—“ This Instrument seems rather to indicate the density or elasticity of the Atmosphere than the weight thereof. Of this, many proofs might be given, but they do not belong to this place.”

## C H A R L E S T O W N.

THE Metropolis of South Carolina stands in the Latitude of  $32^{\circ} 45$ , and about  $4^{\circ}$  West of Philadelphia, and 79 from London, on a W. S. W. Course. This Town is built on a narrow Peninsula, which is formed by the conflux of Ashley and Cooper Rivers, which are broad and deep, and discharge



charge their Waters into the Ocean about six Miles below the Town.

IN these Rivers is a rapid Flood and Ebb, and the Tide in common rises and falls about five feet, but at New and Full Moon seven Feet. As the Gulph of Florida runs with a swift Current towards the Northeast, at the distance of about 15 or 20 Leagues from this Coast, it will be readily understood why a strong N. E. Wind should always make a High Tide in those Rivers, as by directly opposing that Stream, it is made to recoil on the Coast of Carolina, and thus causes the Rivers to Swell.

THREE sides of this Town are washed by the above Rivers; the Ground between them being so Low and Level, that it is not seven feet, nor is the Country for 20 Miles in circumference 10 feet higher at a Medium, than the surface of full Sea is at Spring-Tides.

THIS

THIS is both a healthy and an agreeable situation in such a Climate, for it stands, as it were, in a large Plain, having a Sea open to it in front, and washed by the waters of two spacious Rivers on either side. Some of the Streets are conveniently wide, but most of them are much too narrow.\* Besides their being a Nursery for various Disorders from their confined situation, they have been found extremely inconvenient in cases of Fires, the destructive effects of which have been frequently felt in this City. The Streets, however, from East to West, extend from River to River, and running in a straight line, not only open beautiful prospects each way, but afford excellent opportunities by means of subterranean Drains for removing all nuisances, and keeping the City clean.

WHEN

\* “NARROW Lanes and Alleys should be prohibited by the Police in every City, for those confined situations are the common sources in which the most infectious and malignant distempers are engendered.”

WHEN the South Wind blows, it is always Warm and Moist, because it comes from the Warmer Latitudes, and sweeps over a great extent of Sea ; that which comes from the Southwest and West is Sultry and Moist in Summer, because it passes over large spaces of heated, marshy, overflowed, or Wood Lands, and in Winter it brings Damps or Rain, being fraught with the exhalations that are made from the above Soils, as well as by those Vapours that are collected and condensed by the high bleak Mountains that lie behind. On the contrary, the Northwest and North Winds are Cool and refreshing in the Summer, but Chilling in Winter, and at all Seasons they dispel Clouds and Fogs by their pure elastic pressure.

IN the Summer Months, a *Southeast* Wind commonly springs up about 10 o'Clock A. M. which is called the *Sea Breeze* ; this begins very gently, but gradually increases  
in

in strength, and fans briskly till 6 or 7 in the evening, when it gradually abates, and ceases before night. About 8 o'Clock at night a small Westerly Wind arises and continues till the same hour next Morning, and then ceases likewise—After a pause of about two hours, the Sea Breeze sets in again as before, &c.

## O F T H E W A T E R.

THE Water in common use for Drinking and Cooking at Charlestown is always Brackish. Fifty-five cubical Inches of this Water was found to weigh Six Grains more than an equal Bulk of Rain Water; and when the same weight of Sea Salt was added to the Rain Water, it precipitated a Solution of Silver when mixed with Spirits of Nitre, became of a Milky colour with Oil of Tartar per deliquium, and tasted like the Well-Water.

Z z

T H E



THE manner of living in Charlestown is much after the English fashion ; but either weak and acid Punch, or Rum and Water, is used by many for constant Drink, and People in easy circumstances make too liberal use of Wine, particularly at and after Dinner, to the great injury of their Constitutions.

TEA and Coffee are also so cheap, that one or other is used twice a-day by people of all descriptions ; for want of Markets in the Country, more Salted and Smoked Meats are consumed by the People there than in the Town ; they, however, abound with Poultry, Milk, wholesome bread, made of Maize or Rice, and the most delicious Fruits.

“ CHARLESTOWN, increases fast in buildings and People ;\* but at present there are not quite

\* Dr. CHALMERS account of Charlestown was published in 1772: Since that time it has increased rapidly ; for by Morfe's Geography, it appears that there were in 1786, 1600 Houses

quite 1200 dwelling houses, with nearly as many kitchens that are built separate, besides a great number of Warehouses.

“ THE White Inhabitants of this Town may be about 5500; but the mortality among them cannot be exactly determined at present, no Register thereof having been kept for several years: Formerly when Bills of Mortality were annually printed, the Inhabitants then being not quite 4000, it appeared that one in 37 died annually, or about one in each family in the space of 7 years and an half.

“ IT must be acknowledged that we are more healthy than formerly, since the Hurricanes of 1752. Children in particular have escaped better since; for before that time, almost half the deaths happened amongst

Houses in the City, with 9600 White Inhabitants, and 5400 Negroes, and that upwards of 200 of the White Inhabitants were above 60 years of age.

mongst those who were under five years of age.

“ BIRTHS cannot be ascertained from the Christenings ; for Children are not always Baptized the same year in which they are born ; but it is certain, they far exceed the deaths of the settled Inhabitants.

“ THE natives, for the most part, rise above the middling stature, and they attain their full height sooner than people usually do in Colder Climates. In general they are of a slender make, have pale complexions, thin lank hair, which seldom curls: Few live 60 years, and the bald, or hoary, and wrinkled appearances of old age, often shew themselves at the age of 30 years, or even earlier, more especially on those who dwell in the Country.”

Dr. CHALMERS

Dr. CHALMERS Account of the state of  
the Thermometer in the Shaded Air, at  
Charlestown, in the year 1752.\*

T H E R M O M E T E R.

	Highest.	Lowest.
January	56	18
February	79	32
March	81	41
April	87	49
May	93	60
June	92	67
July	101	74
August	96	68
September	84	64
October	83	55
November	81	45
December	74	32

\* FROM Dr. John Lining's Letter to Dr. Robert Whytt,  
it appears, that in the beginning of August, of the year 1748,  
the weather was warmer at Charlestown than he had ever  
known it in that month: The Mercury for some days at  
2 o'Clock



State of the Thermometer in the Shaded  
Air at Charlestown in the year 1759.

THERMOMETER.

	Highest.	Lowest.
January	68	27
February	73	31
March	74	40
April	79	55
May	85	51
June	92	63
July	93	65
August	90	61
September	85	59
October	81	45
November	74	31
December	71	28

2 o'Clock, rose, in the Shaded Air, to the 96th Degree, at which time several died of Apoplexies.

THE latter part of August, and the first week in September, were much more temperate; the weather being then much as usual at that season of the year.

THE

“ THE foregoing tables shew a considerable difference in the temperature of our Air, and this may in part account for the changes that are brought about in our Constitutions. If the Thermometer, exposed to the Sun during our hottest weather, was compared with the greatest Winter's Cold, the difference might be 100 degrees.

WHY the method of keeping a Register with two Glasses, the one exposed to the Sunshine and the other kept in the shade, is not attended to I know not; for the mediums of both, taken together, would, in my opinion,

THE second week in September was Cold, the Wind being constantly Easterly, and the weather cloudy.

IN the latter part of September, and from the 1st to the 18th of October, the greatest heat at 2 P. M. was  $79^{\circ}$ , and the lowest Degree of heat, during that time at the same hour, was  $52^{\circ}$ ; the greatest nocturnal heat was  $71^{\circ}$ , the least  $42^{\circ}$ .

THE greatest increase of heat in 24 hours, was  $17^{\circ}$ , the greatest decrease of the same was  $22^{\circ}$ .

IN all the month of September, and in the greatest part of October, the Wind was Easterly.

nion, come nearer the truth in estimating the effects of the weather on the human body ; for it seems clear to me that by keeping a Thermometer in the shade only, we discover no more than the greatest Coolness in the Air ; but it in no wise points out that degree of heat which those sustain who are obliged to be much abroad in the day, as is the lot of the greatest part of the people of this State, (particularly of the Slaves.)

THOUGH much moisture is always present in the Air in this Climate, yet it increases with heat ; for it Rains as much (as appears by Registers which I have kept of the weather for 10 years) in Summer as in the Winter and Spring taken together, and still more Rain falls in the Autumn.\*

THE

\*FROM a comparison of the Tables of Meteorological observations made at Charlestown with those made at Jamaica, which is situated between 3 and 4 degrees within the Tropic of Cancer, the Climate of the latter appears much more salutary

“ THE ordinary distribution of the months into seasons does not appear suitable for this Climate. For certain it is, that taking the  
 3 A whole

as well as more agreeable than the former.——“ IN the West-Indies, during the six months of the year, when the Sun has passed the Equinoctial line on his annual return to either Tropic, that Season is called the Summer; so from the 20th of March, when the Sun passes the Equator into the Northern Hemisphere to visit the tropic of Cancer, until the 21st of September, when he repasses it into the Southern Hemisphere to re-visit the tropic of Capricorn, it is considered the Summer Season in the West-Indies, and the remainder of the year is called Winter. Within the tropics the heat is nearly uniform, seldom varying on any given spot, either by Day or Night 16 degrees: at a medium, on the Coast, and on Plains not much elevated above the level of the Sea, the Heat is about 80 of Farenheit's, or 21 of Reaumer's Thermometer; and the difference between the Heat of January, the coldest month, and of August the hottest month of the year, is seldom above 6 degrees; but between the Heat of the Morning and Noon, the difference is 16°. The Rains begin in April or May, and continue 6 or 8 weeks—and again in September, when they are violent and heavy; but when the Sun arrives at the tropic of Capricorn, its greatest Southern distance on the 21st of December, the season becomes dry and pleasant, accompanied with Night Winds from the Land.” (*Mosely, on Tropical Diseases.*)



whole of the month of March together with respect to the temperature and qualities of the Air, it does not differ much from some of those that are called Winter Months ; it is, however, retained here in compliance with established custom as belonging to the Spring, though the medium of the Thermometer be 10 degrees less than it is in April.\*

THOUGH we might expect the Spring should be the most wholesome season of the four in this Climate, because the Air is then impregnated with exhilarating and refreshing exhalations issuing from a boundless variety of Vegetables just emerging into life ; yet we find it is less so than Winter “ with his Russian Blasts,” owing to the sudden and extreme Vicissitudes of the weather, especially in the early part of that gay season.

IT

\* IN Muschenbrocks Element's of Natural Philosophy, it is said that in all the countries within the tropics, the greatest degree of heat rises only to 88 or 90, and the lowest falls to 72 or 70.

IT is, however, much more wholesome than the latter part of Summer and Autumn, when the weather becomes not only more variable than it was before, but the Atmosphere also becomes loaded with exhalations from deciduous and putrifying Vegetables, as well as from the innumerable bodies of Insects, and other Animals, which having answered the ends of their generation, are now dying in all corners, and which as well as the Miasmata exhaled from Marshes and Lakes, unless dissipated with High Winds, contribute to poison the principle of life.

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*An Account of the Weather and Diseases  
which occur in Charlestown at the different  
Seasons of the Year.*

THE DISEASES OF MARCH AND APRIL.

“ ALTHOUGH the weather be much Warmer in March than it is in the preceding Month it is still changeable, as being intermixed

termixed with Cold, Windy, and Warm days, in which the Mercury sometimes rises nearly to the 80th degree, and falls in a few days to the 40th ; the contrary also often happens in a short space of time.

PLEURISIES, Peripneumonies, Quinsies, and Catarrhus Fevers are often epidemic this month, and often continue throughout the month of April, but with a less degree of inflammation.

WHEN one person in a family sickens, and the Disease cannot be removed in a few days, nothing is more common than for some of the attendants to be seized in the same way. This gives an alarm to their neighbours, who conclude the Disease to be infectious, than which there is nothing more foreign, for it is owing to the similarity of Constitutions which now prevails, and to greater exposure than common to the remote causes. For those who depart from their customary  
manner

manner of living are most in danger of Diseases at all times. This is particularly the case of Nurses, who are obliged to go often out of a warm room into the cold Air at all hours, and are often deprived of their rest, &c.

WHEN the Patient had a Cough and Spitting before he was seized with a Peripneumony at this time, the expectoration will generally be pretty free on the 2d or 3d day of the Disease, provided care has been taken; and it also will be more plentiful than it was in the like disorder during the three preceding months—The blood too being of a laxer consistence than is commonly observed when drawn in the month of February, shews signs of less inflammation; for though a pellicle of Coagulable lymph may still appear, yet this will be thinner and not so tough as in the preceding month.

YOUTH are observed to be more liable to  
inflammatory



inflammatory complaints in March and April than at any other time of the year ; and though the Fevers which occur at this time are mostly attended, and perhaps depend upon catarrhal affections at first, they generally remit, and frequently become Quotidian Intermittents in a few days if properly managed ; else they may continue till the 7th, or longer, and a delirium, bleeding from the nose, or both, may be frequent in them. During these two months the two last mentioned symptoms are not uncommon in Pneumonic affections.

WHEN the weather is warmer at this time, Women, and weakly Men have Fevers, with some degree of Cough and Pain in the side or breast ; but they remit from the beginning, and in a few days end in Quotidians, in which much Bile is sometimes discharged upwards at the beginning of the Paroxysms.

THE Gout and Rheumatism, Serous, or  
inflammatory.

inflammatory Quinsies, and the Erisipelas also appear at this time ; the latter in particular oftener than at any other time of the year. The Effera likewise is not unfrequent, but it happens mostly in the first attacks of Intermittents—It also sometimes happens without any Fever, and is very troublesome.

\*FORMERLY the Scarlet Fever used to appear amongst our vernal Diseases, but whether generated, here or brought to us from other parts, I cannot say : But as it has not occurred in the course of my practice for 18 years

\*(ACCORDING to the account of Tournfourt, the Cynanche Maligna, which he calls the Child's Plague, was first imported into Europe from the Levant 60 years before the period of his observations, which were published 30 or 40 years ago.) But whether the Scarlatina be the same Disease only rendered different by the circumstance of climate, situation, modes of living, and constitutions, I have not yet been able to ascertain ; nor do I know whether the same person is liable to either of them more than once.)

(THE Scarlatina is not entirely confined to Children; for in August, of the year 1791, I attended a Patient of the name of Miller, who had it in a very violent manner in the 36th year of his age.)

years past till lately, I believe it is not a Disease of this Climate.

A COMPLICATED and very acute complaint appeared here in the month of October, 1770, which was said to have passed hither from Georgia, where many people died of it; besides the common symptoms which appear at the commencement of the generality of Fevers, a Quinsy generally appeared at the beginning, with great inflammation of the Velum, Uvula, and Tonsils; and quickly spreading to the Eustachian tube—and in those who recovered (as most of them did) the inflammation extended to the throat, from the throat to the *Alæ Nasi*, which soon became ulcerated, and a vast discharge issued from the Nostrils, at which time the voice was hoarse, indistinct, and snuffling.

THE tongue in many was greatly swelled, and extended insomuch as to hang out of the mouth. After the inflammation had continued

continued a few days, the fauces and Uvula became ulcerated, and appeared of a bright pearl, or dusky brown colour.

THE Gargarisms I used in such cases were decoctions of Peruvian and Oak Bark, with a small proportion of *Serpentaria*, to which Red Wine, Tincture of Myrrh, or Brandy, were added; and they were likewise acidulated with Spirits of Vitriol or Alum, always in a greater or less proportion as the condition of the Ulcers appeared to require. Half a spoonful of the same composition was also directed to be often swallowed both to cleanse the throat, and give tone to the system.

AT the beginning of this complaint, Blistering across the throat, and the back part of the neck, and receiving the steams of hot water and Vinegar into the throat, was of sensible service. As soon as the activity of the Pulse began to abate, the Bark, in Powder,

3 B

was



was exhibited liberally, mixed with the above decoction, &c.

WHEN the Inflammatory Symptoms appeared considerable, the Lancet was always employed, and apparently with real benefit.

VERY few who were affected with this species of Quinsy escaped without having both Scarlet and Miliary eruptions, which generally appeared on the 2d or 3d day of the Fever. And it is remarkable, that they who had the two latter complaints in a copious manner, for the most part, suffered less from the Angina. In those who had frequent Vomitings, and large Watery stools, the danger was very great.—These were therefore endeavoured to be restrained by Opiates, Warm Spirituous fomentations, and hot applications to the Body and Limbs.”

OUR Constitutions become so changed towards the end of April, provided the Season

son be but regularly Warm, that Fevers prove either Quotidians, or Tertians at once; and are often times attended with Bilious discharges both ways.

THE long continuance of hot weather never fails to relax and debilitate the Solids in the same manner as if they had been overdistended.

THOSE who have swelled Spleens, or the Jaundice; pale Girls and Women who have defective Menfes, are liable to hemorrhages from the nose or lungs, more especially during Fevers.

#### DISEASES of MAY and JUNE.

IT may be observed that those complaints which depend upon a *Weakened tone* of the *Solids*, and a *loss* of *Harmony* between the Nervous and Sanguiferous Systems (which is presumed to be the case in Intermittent, and  
Remittent

Remittent Fevers, Choleras, Dysenteries, &c.) begin to make their appearance here early in the Summer, when the preceding months have been warm and moist, a state of the Atmosphere which never fails to induce that state of the System favourable to the operation of their remote causes.

\* DISEASES of JULY, AUGUST and SEPTEMBER.†

FEVERS with great Languor, profuse Sweats, and other profuse discharges, particularly with diarrhœas appear in each of these months.

\* D. LIND, who had the best opportunities of informing himself, says, in his Essay on preserving the health of Seamen, 2d Edition, page 49.

“A Malignant Fever of the Remitting or Intermitting kind, most frequently a double tertian is the genuine produce of heat and moisture, is the Autumnal Fever of all hot countries; and is the Epidemic Disease between the tropics.

† THE excessive heat of the weather in Carolina, during the growth of the Rice, in the months of July and August, has sometimes produced a Remitting Fever with malignant Symptoms, similar to that which in the West-Indies goes by the name of the Yellow Fever.”

months. But as in the two latter months, the winds often shift to the N. or N. E. with an increased coldness in the Air, after a Thunder Shower, the paleness and shrinking of the skin, and chilly sensations that always precede an Intermitting Fever, will then be more sensibly distinguished, but is seldom so perceptible in the complaints of July.

#### DISEASES OF OCTOBER and NOVEMBER.

DISEASES of a mixed kind, or between the Inflammatory (or rather mild Inflammatory Diseases which appear in these months soon terminate in Remittents or Intermit-tents) and Intermitting are seen in October and November, and also (as should have been observed before) in March and April; at which time our Constitutions are as it were in a middling state with regard to ten-sity and laxity.

IN Winter again, when the weather is  
clear



clear and cold, the Solids being then springy and tense, and the constituent particles of the blood more intimately united, Intermitting Fevers are seldom seen, having given place to other Diseases of an opposite nature; unless the weather be unseasonably warm.

HENCE it appears, that the strength or weakness of our bodies keeps pace with the weather; and that they do not pass to either extreme all at once, but rather by degrees, or according as the Air changes in its temperature at different seasons of the year; so that these do not succeed each other suddenly, but with a gradual progress, our Constitutions conforming thereto, whether the transition be from cold to hot, or the contrary. The truth of this reasoning, every observant person may perceive, by an increase or abatement of his own strength, and the difference that of course happens in the Diseases of the several seasons.

“ THOUGH one day of bad weather may  
produce

produce various complaints, yet before any (Epidemic, or) popular disease can take place, (setting aside those that are contagious or infectious, that is, those whose remote cause is a specific poison received into the body by the Lungs or Absorbent Vessels over the surface of the body) the air for a considerable continuance of time must have been of some certain temperature and quality, or nearly so, and then a sudden change must take place in that temperature before it can produce a morbid change in the functions of the body. And as these effects are brought about sooner or later, according as other causes have concurred in rendering one constitution more infirm or susceptible of impression, or they be more or less exposed to the weather so changed, they may sicken in great numbers nearly at the same time, or in a more scattered manner one after another, though then a strong similarity may, in many respects, be observed in most cases.

WHEN the season is very inconstant, a  
variety

variety of complaints and confusion in their symptoms generally ensue, according to the state the body happens to be in when acted upon by such a shifting mixture of different impressions ; and then the observation of Hippocrates is likely to be verified, “ That all diseases happen at all seasons.”

I have remarked that the returns \* of periodical disorders, and the symptoms of those that are of the more continued sort, conform in a good measure in their accession or times of attacking, with such parts of the 24 hours, as come nearest to the temperature of those seasons to which these several complaints seem, as it were, properly to belong. Thus, if the morning be supposed the Spring, noon the Summer, evening the Autumn, and night the Winter of the day, as the parallel will run  
very

\* This corresponds with what Dr. Cullen has observed with respect to the times of accession of the different varieties of Intermittents. Vol. I. p. 59.

“ Quotidians come on in the morning, Tertians at noon, and Quartans in the afternoon.”

very nearly when the weather is settled; vernal disorders ought to commence or be increased in the forenoon, and abate towards the evening, or in the forepart of the night; those of the Summer should invade towards noon and decline in the evening; but at whatever time they return, their symptoms will certainly be heightened in the middle of the day. On the other hand, Autumnal disorders should attack or be aggravated about 4 or 5 o'clock, P. M. And such disorders as are common to the Winter, either come on or are much increased in violence at the beginning of the night, and remit or go off towards morning, continuing more moderate till the next evening, unless the weather be very cold.

THE disorders of the first period, are not so certain in their onsets and exacerbations; but for the most part a striking agreement will often be perceived in them.

EXCEPTING the Plica and a few such oddities, the people of South-Carolina are liable  
 3 C to



to all the disorders that are to be found elsewhere, or which can arise in constitutions, that are differently modified in the various seasons of the year. The endemic diseases of this place are common to other warm climates.

THE Tetanus appears here at all seasons, more especially from wounds or ulcers of the tendinous parts, and to this disease new-born infants are very liable; nor have I known more than one out of many hundreds of them recovered from it.

EXCEPT during the winter, varieties of the Intermitting Fever are common at all times; and periodical pains in different parts, particularly in the head; many persons being daily more or less affected with it, owing to an Atony and want of a perfect balance between the heart and extreme vessels, the latter appearing from the paleness and coldness of the skin to be spasmodically constricted: such people have seldom a natural warmth in  
their

their hands, much less in their legs and feet : Menorrhagiæ, Abortion, and Prolapsus Uteri, and other sexual diseases are very common and generally alarming.

FROM a want of excitement in the nervous system, or from an Atonia of the sanguiferous vessels, and a diminished momentum of the blood, congestions of the fluids, or obstructions of the Viscera, especially of the Spleen, are frequent in the Autumn, as are local and general Dropsies and Hernias, and few adults have escaped the Piles, some people being daily more or less troubled with them : The Scurvy in a mild degree is also very common here; the gums first become spongy, and are soon destroyed, so that the sockets of the teeth being thereby exposed to the air, they become carious, and not only useless but painful. The Rheumatism may be deemed one of our periodical diseases; the Gout too is a frequent and unwelcome guest with the opulent and luxurious.

W H A T E V E R

WHATEVER be the nature of that humour or matter which communicates the Lues Venerea, the Yaws and the Lame Distemper, or Joint Evil, called in the West-Indies the Cacobia, whose direful effect are to destroy the smaller joints first, and afterwards the larger ones, all seem owing to somewhat, not very dissimilar; for they all three terminate nearly in the same manner when not properly managed or when left to take their own course, and appear to be curable almost in the same manner.

THE Trismus, or Jaw-Lock, is very common among negro infants soon after birth, and is supposed to be occasioned by the heat and smoke of the cabins in which they are born, and subsequent exposure to cold and damp air. Children are very much infested with worms in Charlestown.

BUT as the remedies generally employed are in no respect different from those employed  
ed

ed in other countries, I shall not transcribe them here.

DR. Lining says, “ The Yellow Fever has been four times epidemical in Charlestown, viz. in the Autumn of 1732,—39,—45,—48 ; and as none of those were remarkable for extraordinary heat or rainy weather, he concludes that it did not take its origin from any peculiarity of the climate or soil, but that it was imported from the West-Indies; and even asserts that whenever the disease appeared, it was easily traced to some person who had lately arrived from the West-India islands, where it was epidemical.”

BUT from a comparison of the description which he gives of the symptoms of this fever, with that given by Dr. Chalmers, and particularly from the more recent observations of Dr. Hunter in the West-Indies, I am inclined to think Dr. Lining has  
fallen



fallen into a very great error respecting the nature and cause of this disease.

FOR the greater yellowness of the skin appears to be the only circumstance in which it differs from the bilious Remittents of hot climates, or very hot seasons of any climate. Dr. Lining himself, though he considers it as a species of pestilence, says, the negroes were exempt from it, though exposed as much as the whites, and that those who were conveyed to the country with it never communicated it to those with whom they had communication.

THE celebrated Dr. Lind of Haflar Hospital, appears to have fallen into a similar error, owing to the misrepresentation of facts by Dr. Warren and others.

HE has also recorded an account of the Yellow Fever becoming epidemic in Philadelphia, in the year 1740, owing to some infected apparel of a gentleman who had died  
of

of it in Barbadoes. These cloaths, says he, being unluckily hung abroad to be aired, presently diffused the contagion of the same fever over that part of the town, and destroyed 200 persons.

IT is however at present generally known (for it has been proved by the most accurate and unexceptionable observations \*) that no infectious disease can be communicated without contact, or the near approach to the body of an infected person, or to fomites or substances imbued with infectious matter or morbidic Miasmata.

EVEN the Pestilence, the most contagious of all diseases, is not communicable by the air, without contact, or the near approach to an infected person, or to some substance which has imbibed the infectious matter: And it is  
more

\* See the papers of the benevolent Mr. Howard on Lazarettos, p. 36. Martin's history of the Plague at Moscow, in 1771. See also the travels of Mr. Bruce, 3d vol. quarto, p. 717 and 18.

more than probable that the Pestilence is only a more violent degree of the Typhus or Putrid Fever, modified and rendered more violent by climate, situation, manner of living, and constitution.

*Of*

*Of the* SITUATION, CLIMATE,  
*and* DISEASES *of* GEORGIA.

THE following is the substance of accounts received from different correspondents respecting the Situation, Climate, and Diseases of Georgia.

THE state of Georgia lies between the 31st and 35th degree of north latitude; computed to be about 600 miles in length, and 250 in breadth. Bounded east by the Atlantic, west by the Mississippi, north by South-Carolina, and south by Florida.

IT is separated from South-Carolina by the river Savannah, and from Florida by the river St. Mary.

AUGUSTA, the present seat of government, is situated on the Savannah river, about 135  
3 D miles



miles from its entrance into the ocean. The town of Savannah, on the same river, which is only 17 miles from its mouth, stands upon an elevated steep bank, and back of it lies an extensive gravelly plain.

THE north side of the river on the Carolina shore is a mere bog, from whence numerous exhalations constantly rise in warm weather, and by which the inhabitants of the town often suffer when the wind is north or north-east.

THE town last mentioned contains about 250 families. The number of inhabitants in the whole state, according to the return presented to Congress, October 28th, 1791, amounted to 82548.

AUGUSTA at present is a very inconsiderable village; but from its favourable situation at the head of navigation, and the productive quality of the soil of the adjacent country, it cannot fail  
of

of rising into consequence in the course of a few years.

THE Savannah is fanned every day in Summer by refreshing breezes from the sea; Augusta is deprived of this advantage by its inland situation.

FROM June to September the mercury commonly fluctuates between  $76^{\circ}$  and  $85$  in the shaded air, but is often as high as 90, and sometimes 100, especially forty or fifty miles from the sea.

IN winter it sometimes descends below  $17^{\circ}$ , but is very seldom below  $32^{\circ}$ . It commonly ranges at this season from 40 to  $60^{\circ}$ .

THE most prevailing winds here in Summer are south-west or east, and in Winter the north-west.

THE east wind is the warmest in Winter, and the coolest in Summer.

THE

THE south, which prevails too frequently for the health of the inhabitants, is damp, sultry, inelastic and oppressive, at all seasons, but amazingly so in the Summer and Autumn.

ABOUT a fifth part of this state is as level as a floor, particularly all that tract which lies between the rivers Savannah and St. Mary, extending 40 miles west. This tract being intersected with numerous rivers, along the banks of which is one continued marsh, the cleared ground is converted into Rice and Indigo plantations. In other respects the country exhibits precisely the same appearance as South-Carolina.

ABOUT 70 or 80 miles to the westward, the land begins to be more or less uneven, rising from small ridges into hills, and the hills successively increasing in height till they finally terminate in lofty mountains.

THAT vast chain of mountains which commences with Kattskill, near Hudson's river in New-York, known by the name of the  
Alleghany

Alleghany and Apalachian mountains, emphatically styled the Spine of North-America, terminates in this state about 60 miles from its southern boundary.

As this state so nearly resembles South-Carolina in situation, soil, temperature of climate, and almost every other circumstance, I shall not trouble the reader with particulars.

DR. Ramsay advises strangers who propose to settle in the southern states, to manage so as to arrive there about the beginning of November, that their constitutions may have time to become accommodated to the climate before the commencement of the sickly season. The same learned and judicious writer remarks, that the sudden deaths of persons unaccustomed to the climate of South-Carolina, are to be referred to an injudicious choice of time in coming to it, and still more to their own imprudence and irregularities, in conjunction with the hospitality of the inhabitants.

## CONCLUSION



## CONCLUSION.

BY comparing the preceding account of the several climates of the United States with those of the countries in Europe in the same parallels of latitude, we learn that there is a very material difference between them.

THIS circumstance is presumed to be owing to the following causes.

1<sup>st</sup>. To the height of the lands in North-America, which are situated between the 40<sup>th</sup> and 50<sup>th</sup> degrees of latitude, and extend between six and seven hundred miles from north to south. From these the greatest rivers have their source. To the east of them lie the lakes Superior, Michigan, Huron, Oswego, Erie, &c. and the intermediate country is covered with impenetrable forests, interspersed with swamps and morasses; \*  
hence

\* To M. de Mairan we owe the discovery that the rigour  
of

hence this vast space is incapable of receiving or retaining much heat in Summer, and consequently one great source of that warmth by which the Winters in the old continent are moderated, is here considerably diminished.

HENCE also the westerly winds, at least such of them as originate behind these high lands, deposite their vapours in passing over them, and re-absorb fresh ones from these numerous lakes and immense forests over which they pass, and are thereby still more cooled; for air always participates of the temperature of the substance with which it comes in contact.

FARTHER north, viz. between latitude 52 and 63, lie Hudson's Bay and Straits; about  
50

of the Winter's cold is tempered by the heat imparted to the atmosphere by the earth, and that this heat is always proportioned to the heat absorbed by the earth in the absence of frost, and that the Winter is more or less severe according as the heat and dryness of the atmosphere has been more or less intense during the preceding Summer.

*Kirwan's Estimate of Climates.*

50 miles on the south of this bay, from lat. 50° to 58°, there runs a ridge of mountains, which prevents its receiving any heat from that quarter ; and hence the intermediate country is so cold that scarce any animal can live in it.

To the east, this bay is bounded by the barren, mountainous country of Labrador, and a number of islands that lie at its entrance. The portion of the Atlantic opposite to the entrance of these straits is surrounded partly by the continent of America, and partly by Greenland as far down as lat. 59. Both are mountainous and intersected by a multitude of creeks and inlets, which are frozen over in Winter, and the ensuing Summer the floating ice is protected by numerous high islands, and partly carried down the eastern coast as far as lat. 42, whereby the coolness of the atmosphere is increased. Hence the N.W. winds are the coldest in all these parts of America during the Winter season, and for reasons which have been explained

plained from page 80 to 96 the north-east as the coldest in Summer.

THE greatest part of the heat of the atmosphere is certainly derived from its communication with the land or water over which it passes, and in this way it receives either heat or cold more readily than any other body of equal bulk, especially when confined, as in vallies.

AIR incumbent on seas or on large tracts of water, is generally many degrees warmer in Winter, and cooler in Summer, than air incumbent on land; because land is more susceptible both of heat and cold than water.

EXPERIMENTS made by Mr. Hales in 1724, prove that the surface of the earth is much heated during the Summer, but that this heat descends very slowly, a great part of it being communicated to the air.



THAT during the Winter the earth gives out to the air the heat it had accumulated during the Summer, and that on this circumstance in a great measure the temperature of the Winter depends.

Now as the earth must receive more or less heat during the Summer season, according to the greater or lesser freedom of access which the sun's rays have to it, and to the longer or shorter duration of their access, it follows that whatever circumstances have the effect of obstructing or preventing this access must diminish the grand source which moderates the rigour of the land winds, which prevail during the Winter season. The principal circumstances which obstruct the action of the rays of the sun upon the earth, are cloudy and wet weather, the effects of extraordinary evaporation.

THE evaporation from the lakes, swamps and forests in America is astonishing.

THE

THE evaporation from land covered with living vegetables is much greater than from that which is bare. The rays of the sun are not only obstructed by the evaporations from these immense forests, but where the trees are tall and close together, they are entirely excluded from acting upon the ground at all.

HENCE it may be presumed that the woods, thickets, and height of the lands in North-America are the circumstances which render the climates of the several states different from, and less agreeable than the countries in the same latitude in Europe, where the lands are lower, and the country more cleared and better cultivated.

WE also learn from the account of the diseases contained in the preceding pages, that the cold of the northern states properly guarded against, produces but few diseases of a dangerous nature, and that Intermitting, Remitting or Bilious Fevers, and Fluxes, are scarcely ever known there ; but in proceeding  
to

to the southward in Maryland and Virginia, where the heat is more intense and of longer continuance, and the soil more moist, especially upon lands in an imperfect state of cultivation, the diseases last mentioned are very prevalent, and often fatal, especially to foreigners ; though the natives who fix their habitations in dry and elevated situations, and observe a medium between excess and abstinence, enjoy a tolerable share of health.

IN South-Carolina and Georgia, Fevers and Fluxes are still more epidemic, violent, and obstinate, especially after the Rice harvest in August and September, when the waters are diminished and permitted to stagnate and corrupt. The fevers which occur at this season are very anomalous, neither intermitting nor remitting perfectly, but participating much of the nature of that commonly called the Yellow Fever, which is often so fatal within the Tropics.

ALTHOUGH the United States of America  
cannot

cannot boast of the superiority of their climates over other countries in parallel latitudes, they are exceeded by few in fertility of soil, and equalled by none in political advantages.

AND, from whatever causes it may proceed, the inhabitants, in the middle and particularly in the northern states enjoy a greater proportion of health, and live to a greater age than the inhabitants of Europe. The diseases which do occur are more simple and uniform; and this country is intirely exempt from some of the most formidable and destructive which infest the other quarters of the globe.

THE Spotted Pestilence, the fatal offspring of famine, uncleanliness, and vitiated air, has never yet reached our favoured shores.

THE Small-pox, the Measles, the Malignant Quinsy, the Influenza, and almost every other contagious disease were foreigners to this continent, till they were introduced  
through



through the medium of commerce from Europe, into which they were first conveyed from Asia, or the dominions of the despotic Turk, bordering on that immense continent.

THE Leprosy, the Yaws, the Eliphantiasis, and other loathsome disorders are endemic to Africa.

WHETHER Africa or South-America gave origin to the Syphilis remains uncertain, though that dishonour is generally ascribed to the latter.

NOR is North-America, like many other countries, subject to earthquakes, the eruption of volcanoes, hurricanes, periodical deluges, impetuous whirlwinds, noxious and consuming blasts of wind, or withering and protracted drought.

WHAT does it avail the inhabitants of Asia that many of their provinces are blest with the most delightful climate and fertile soil  
that

that imagination can conceive, since they themselves are in subjection to the arbitrary will of a capricious and despotic tyrant.

ONE half of Africa lies beneath the burning line, and its fable inhabitants are all immersed in rude and dismal barbarism, entirely unacquainted with the use of the Plough and the Loom.

EVEN in Europe (the seat of Science and the nurse of Arts) Liberty, “ the most precious gift of heaven to man,” is scarcely known, or only enjoyed by the lucky and the favoured few. The rest are greater drudges than the beasts they own ; for there, society is divided into two distinct classes, nobles and commons, lords and tenants : the former possessing and enjoying every thing; the latter indigent, oppressed, and almost destitute of the common necessaries of life.

NORTH-AMERICA is the only portion of this spacious globe where man can live

live securely, and enjoy all the privileges to which he has a native right.

IN this enviable and favoured region there is no proud—usurping aristocracy—no ecclesiastical orders with exclusive privileges—no kings with arbitrary power or corrupting influence—no venal parliaments composed of different ranks and opposing interests—no monopolizing confederacies of opulent and interested traders and manufacturers, to the exclusion of those to whom chance or fortune has been less liberal.

NOR are the taxes or expences of government so considerable as to consume the profits of honest industry, or ever employed to gratify the splendid projects of mad ambition.

IT is true none of the enervating refinements of luxury or dissipation are to be found here ; but here all the necessaries and conveniences of life abound, and a pleasing  
equality

equality and decent competence are every where displayed—here the dignity of the human species is restored, and man enjoys all the freedom to which he is entitled ; for here he is a member of the government he obeys, and a framer of the laws by which he is governed, either in person or by the representatives of his own choice.

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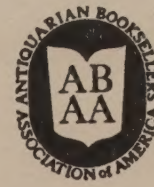
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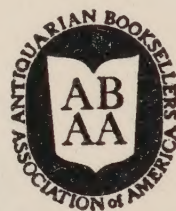
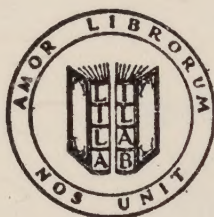
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